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FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

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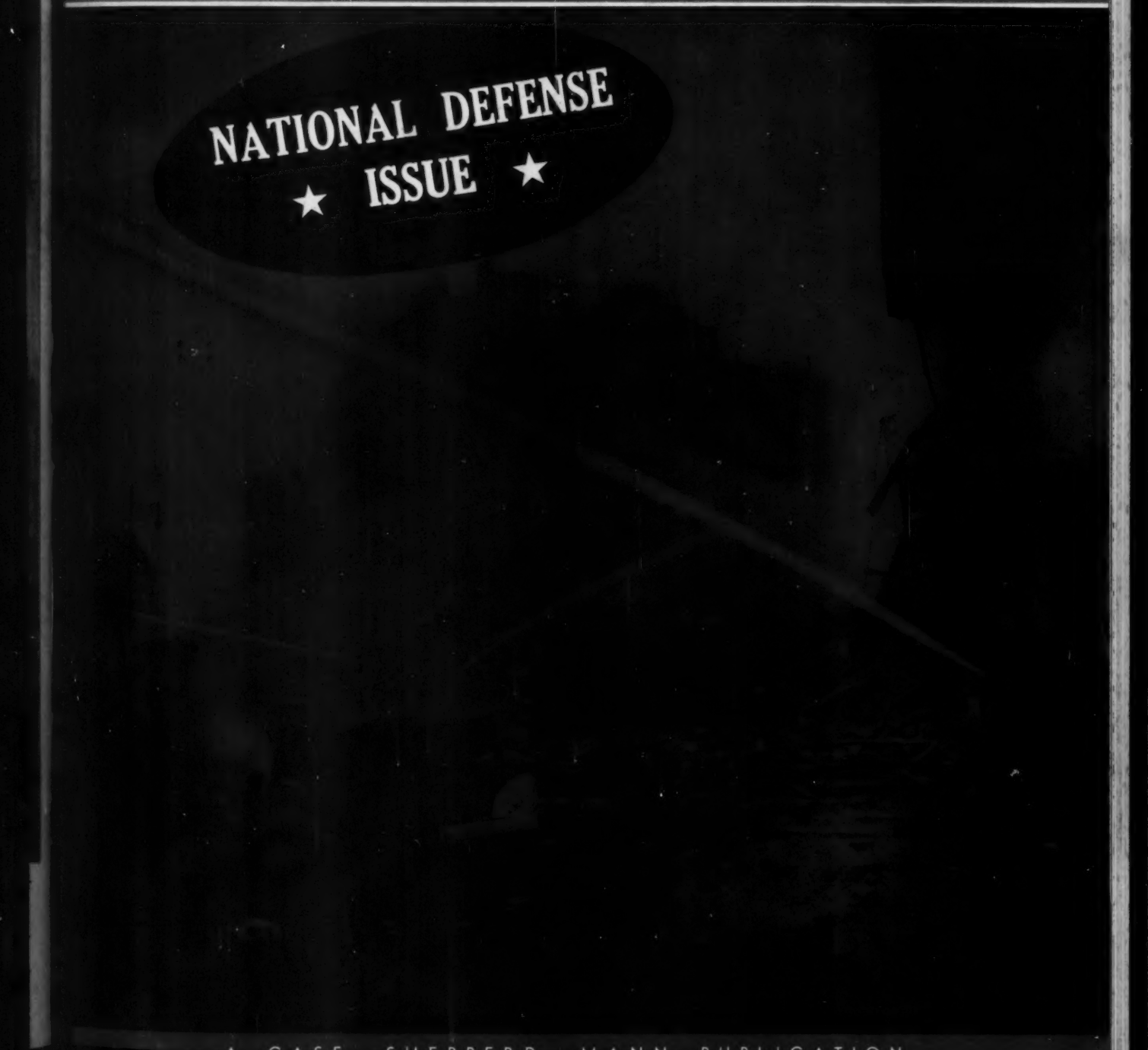
MARCH, 1942

Vol. 95, No. 3

NATIONAL DEFENSE ★ ISSUE ★



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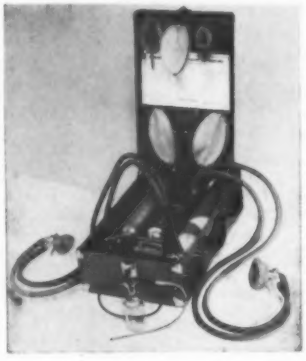

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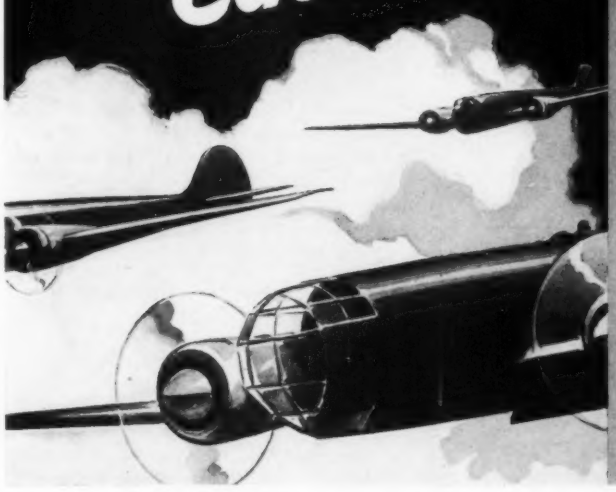

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FIRE ENGINEERING

A Consolidation of Fire and Water Engineering, The Fire Engineer and Fire Protection

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FRED SHEPPERD
Editor
N. N. WOLPERT
Assistant Editor

A NEW DAY WILL DAWN

THAT "A priority is the right to ask first for something you can't get anyway," is a fact that many Fire Departments have learned from experience, for deliveries of apparatus have been held up indefinitely, due to the producers' inability to get materials classed as "vital to national defense."

● The situation is not hopeless. There will be a new day!

● While defense of this nation against its enemies abroad requires at this moment every available pound of critical metals for erection and equipping of new plants, and producing munitions, the necessary plants will ultimately be completed, and then the demand for vital materials will be largely for munitions production alone.

● Thereafter the metal shortage should be eased materially, and the delays in production of fire apparatus, reduced, or eliminated entirely.

● In the meantime, patience will be in order.

The Publishers

FIRE ENGINEERING

The Journal of the Fire Profession since 1877; published on the tenth of each month by Case-Shepperd-Mann Publishing Corp., 24 West 40th Street, New York City, also publishers of *Water Works Engineering, Sewage Works Engineering*, etc. ¶Subscription price U.S. and Latin America, $2 a year; Canada, $2.50; Foreign, $3; Single copies, 25c. ¶Member of Audit Bureau of Circulations and Associated Business Papers, Inc. ¶Entered as second-class matter April 15, 1929, at the Post Office at New York, N. Y., under Act of March 3, 1879. ¶Contents of this issue copyrighted, 1942, by Case-Shepperd-Mann Publishing Corp. ¶KARL M. MANN, President; I. HERBERT CASE, Vice-President and General Manager; ALFRED J. HOUGHTON, Eastern Representative; WM. H. TOPHAM, Circulation Manager; H. S. ESSEX, Production Manager. CHICAGO OFFICE: W. S. CLEVENGER and L. M. ROCHE, 6 No. Michigan Ave.; SAN FRANCISCO: CHARLES H. WOOLLEY, 444 Market Street; LOS ANGELES: AUGUST HAURIN, 6000 Miramonte Blvd. ¶Printed in U.S.A. ¶Price on this Special Issue, 50c per copy.

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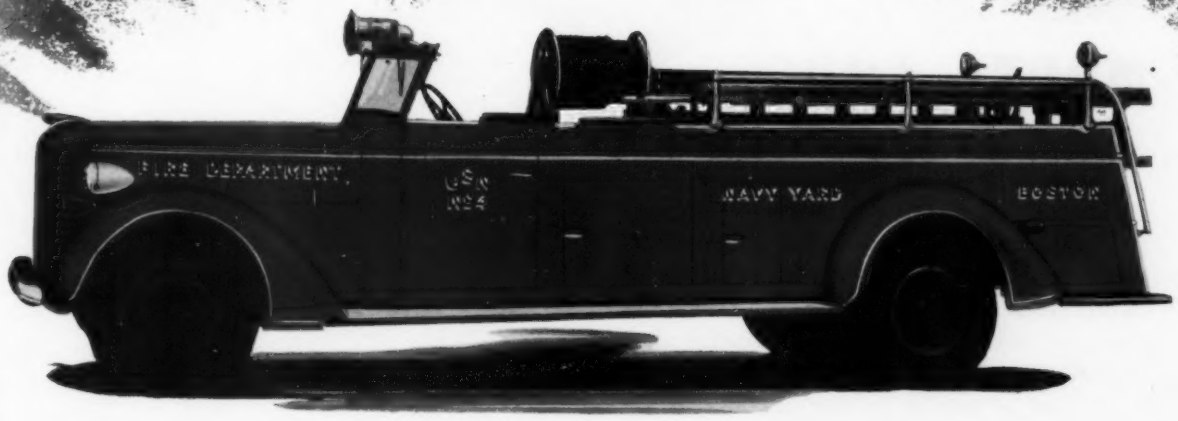
SUPERIOR FIRE DEFENSE



Another U. S. Navy Yard strengthens its defenses with a Buffalo Pumper.

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PROVEN in fire service for rescue work. The ladder's stability and safety inspires confidence.

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PROVEN in fire service for water tower work.

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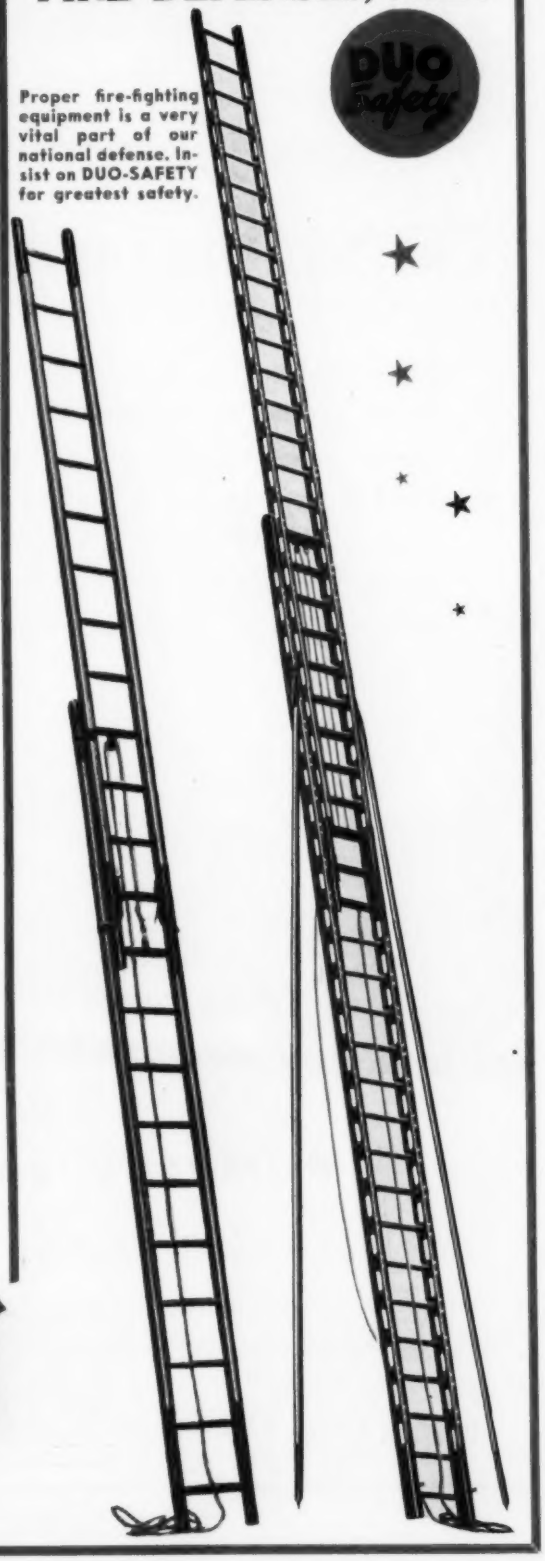

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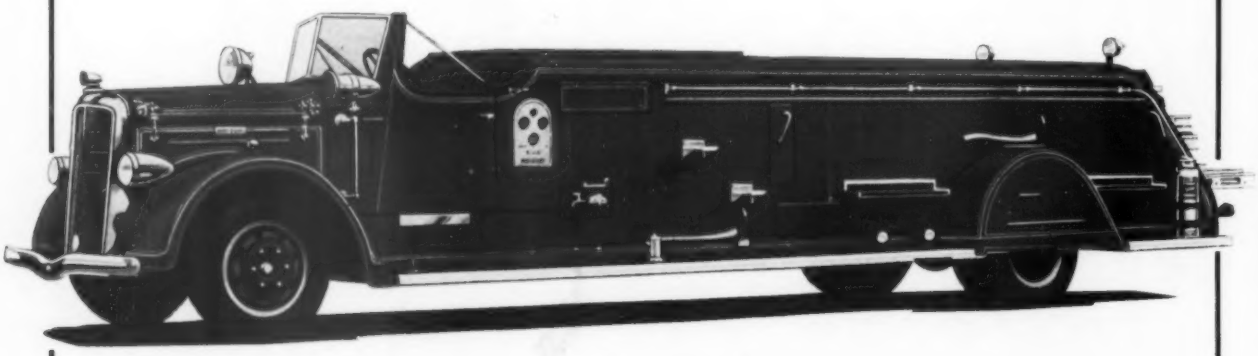

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FOR FIGHTING FIRES

GREATER SAFETY
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MORE EFFECTIVE
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BECAUSE OF CONTROLLED ACTION AT YOUR FINGER TIPS

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With "Aqua-Gas" Fog-Stream nozzles there are three replaceable straight stream tips so that in a moment a tip can be changed for a selected size of stream.

You are thus prepared for every fire condition.

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MORE FACTS FOR FIRE CHIEFS

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INDIANS USE CLEAR WATER ONLY—NO CHEMICALS

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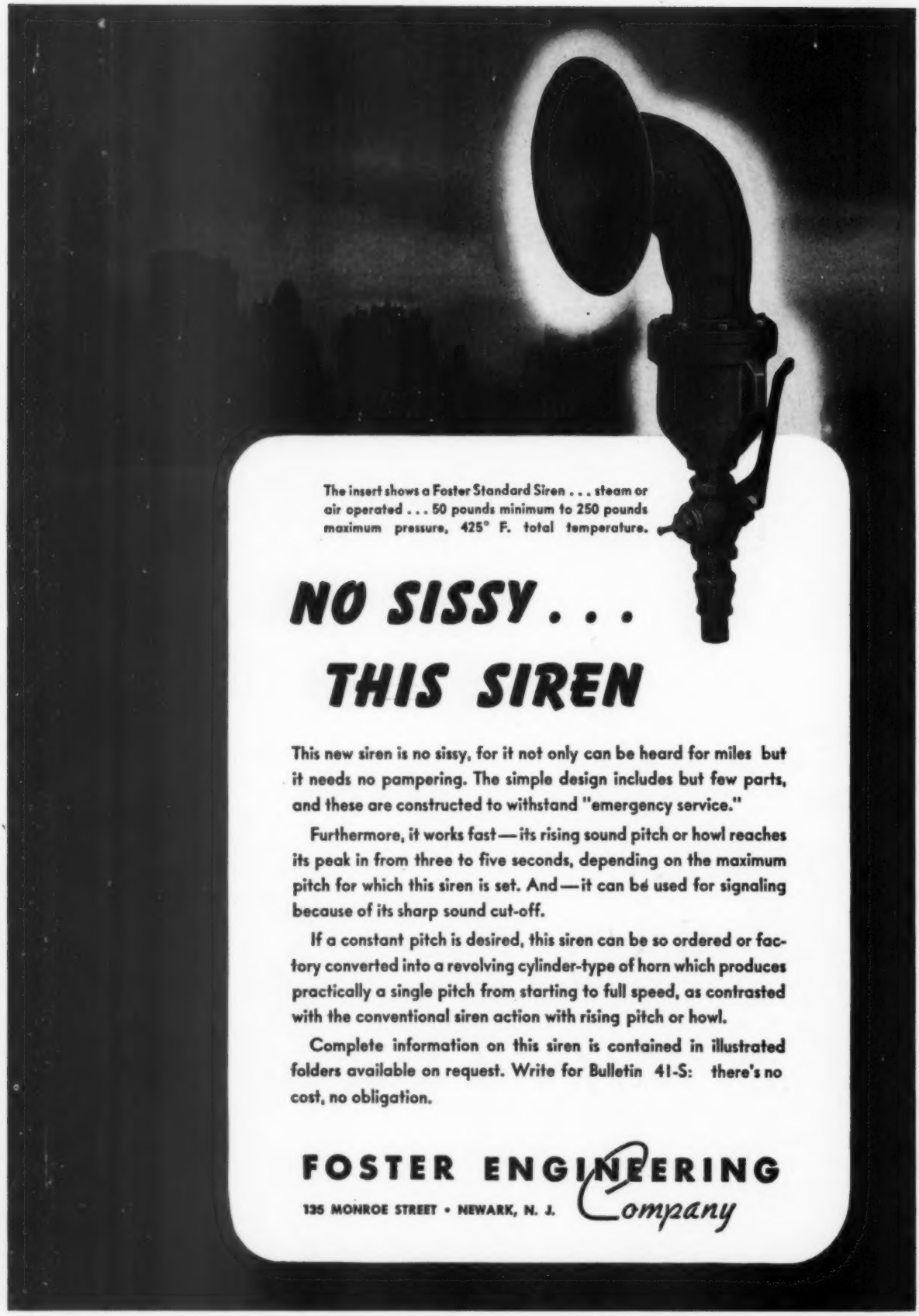

The insert shows a Foster Standard Siren . . . steam or air operated . . . 50 pounds minimum to 250 pounds maximum pressure, 425° F. total temperature.

NO SISSY . . . THIS SIREN

This new siren is no sissy, for it not only can be heard for miles but it needs no pampering. The simple design includes but few parts, and these are constructed to withstand "emergency service."

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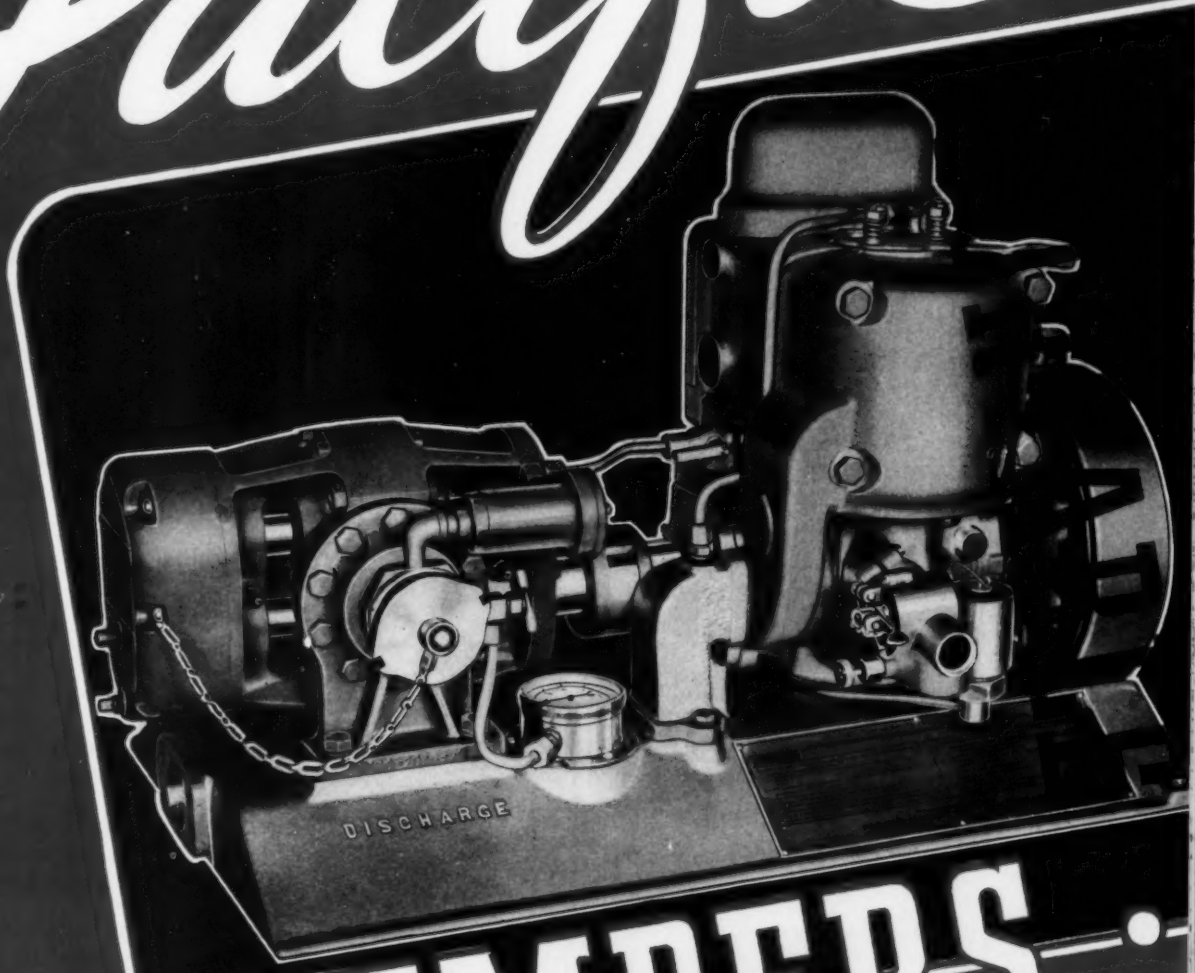
Pacific



PUMPERS

Fire Fighting Equipment Division

of the **PACIFIC MARINE SUPPLY COMPANY**

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to PROTECT your PUBLIC

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AIR RAID SIRENS
TO WARN MILLIONS IN NEW YORK CITY

Stop playing with untried and unimproved gadgets, use reliable and approved warning signals. Insist on the type England uses—Demand H.O.R. Sirens

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The H.O.R. Co., Inc., second to none in this field, is ready to help you.

H.O.R. air raid sirens have been proven in their efficiency under all conditions and have been manufactured since 1934.

Do not delay, write immediately for full information and data on how to plan, install and operate air raid warning sirens.

Delay may prove costly—act now and we will do our best to cooperate with you in fast delivery.

CONSIDER THE FACTS

The mythical idea of having a sounding unit to give three to five miles coverage sounds good, but, it is unpractical. Remember, when a person can hear a sound unit at five miles distance, the one within several hundred feet from it would have his ear drums permanently injured. So do not be fooled with these ideas, but follow sensible methods with a sensible warning signal. We are prepared to give you substantial advice.

★ ***Write today for further details*** ★

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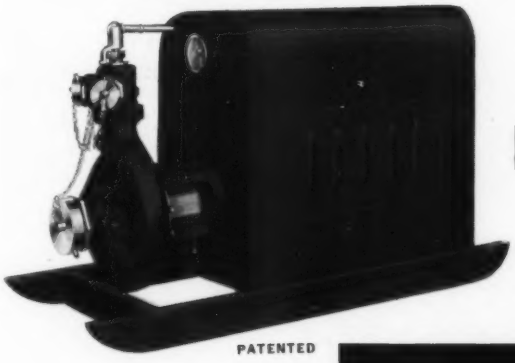
Barton-American Front Mounted Centrifugal Fire Pumps are especially adaptable for National Defense

These time-tested pumps are available in different types—sizes from 25 to 600 GPM at standard pressures



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SKID MOUNTED FIRE PUMP

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Barton-American Front Mounted Centrifugal Fire Pumps are being installed on new and used commercial trucks—even utilizing chassis as old as 1925.

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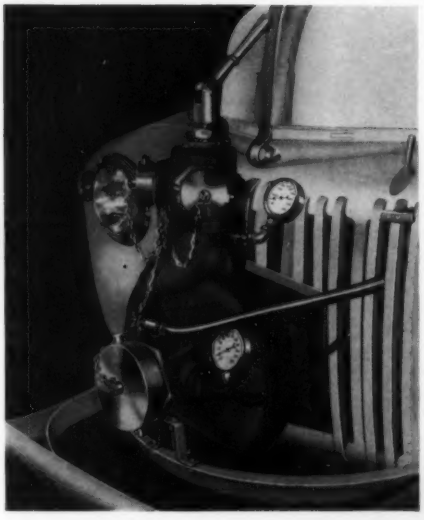
TRUCK MOUNTED FIRE PUMP



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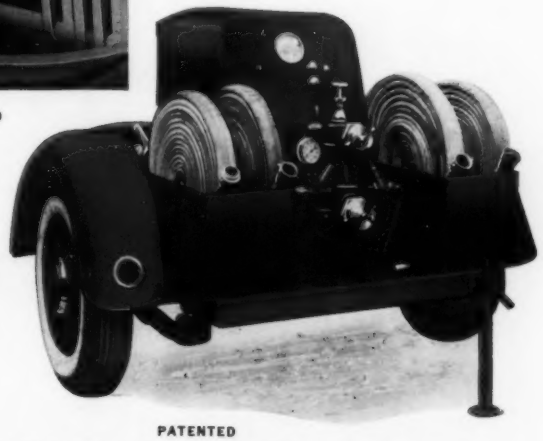

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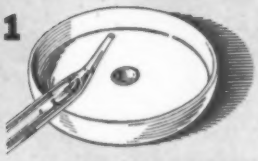
This "FRIED EGG TEST" proves that MACMILLAN RING-FREE MOTOR OIL actually removes Carbon

1

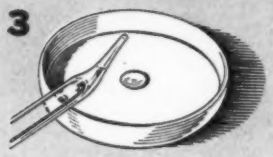


Heat an evaporating dish to engine temperature. Put 2 drops of a competitive oil in the hot dish.

2

See how it cooks down to a hard black deposit of carbon. That's what happens in your pistons when this competitive oil gets hot.

3



Now heat a clean dish and put in 2 drops of Macmillan RING-FREE Motor Oil.

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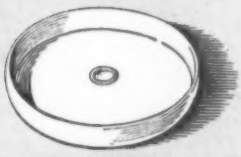


First, see how RING-FREE cooks down to a small brown spot, but—

5

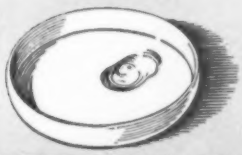
—in a few seconds the spot completely disappears, leaving the dish clean and entirely free from CARBON.

AND—if that isn't proof enough—go back to the first dish where the competitive oil left that hard, black deposit of carbon.

6

Put 1 drop of RING-FREE on the carbon deposit.

7



As RING-FREE vaporizes, the carbon actually disappears!

MACMILLAN RING-FREE MOTOR OIL

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WHY CAN RING-FREE REMOVE CARBON —*how can we guarantee it?*

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DEFENSE FIRE EQUIPMENT

War introduces new fire fighting problems. Destroyed or obstructed highways, damaged or destroyed water supply systems, incendiary bombs with their multiplicity of fires—all these things upset peace time standards of apparatus, man- and motive-power.

No single piece of fire apparatus meets all requirements, but LaBour Fire Trailers have actually proved their efficiency and effectiveness under actual war conditions both in this country and abroad. They have stood the test of service.

The most important part of the LaBour Fire Trailer is the pumping unit itself. This centrifugal pump is automatically and inherently self priming without the use of any auxiliary apparatus and without the need for manual control, yet the pump is so simple that it has only one moving part and is not injured by dirty water.

The LaBour Fire Trailer is relatively light in weight and is easily maneuverable under adverse conditions such as over rubble filled streets or soft ground.

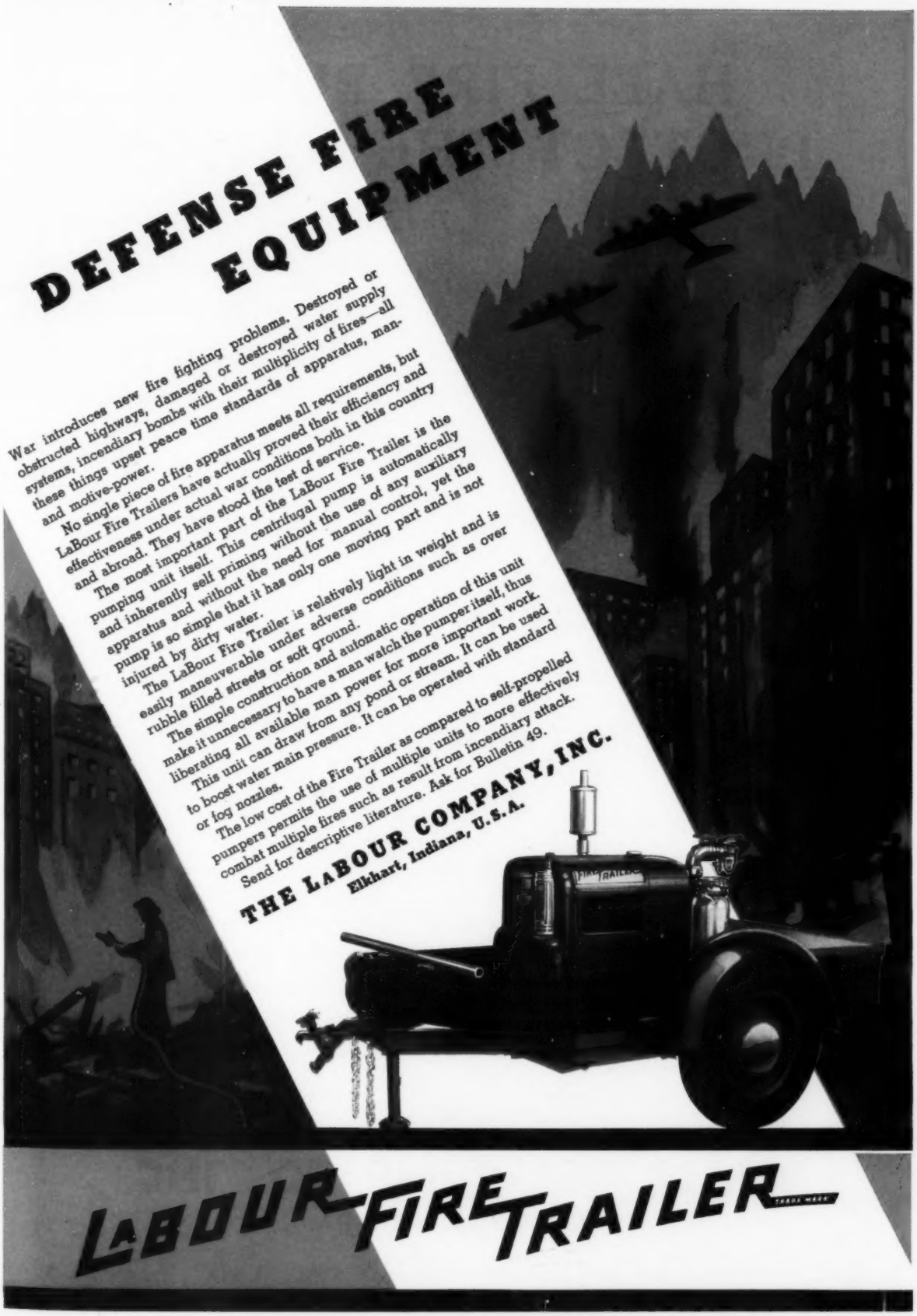
The simple construction and automatic operation of this unit make it unnecessary to have a man watch the pumper itself, thus liberating all available man power for more important work.

This unit can draw from any pond or stream. It can be used to boost water main pressure. It can be operated with standard or fog nozzles.

The low cost of the Fire Trailer as compared to self-propelled pumpers permits the use of multiple units to more effectively combat multiple fires such as result from incendiary attack.

Send for descriptive literature. Ask for Bulletin 49.

THE LABOUR COMPANY, INC.
Elkhart, Indiana, U.S.A.



LABOUR FIRE TRAILER TRADE MARK

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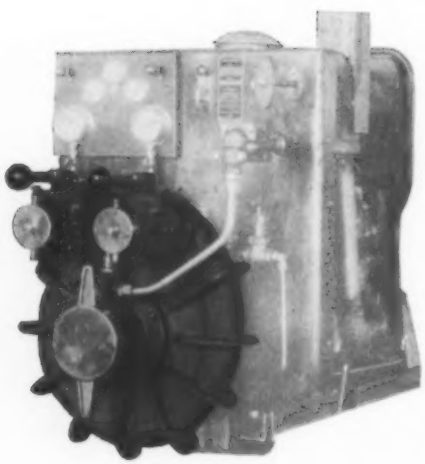
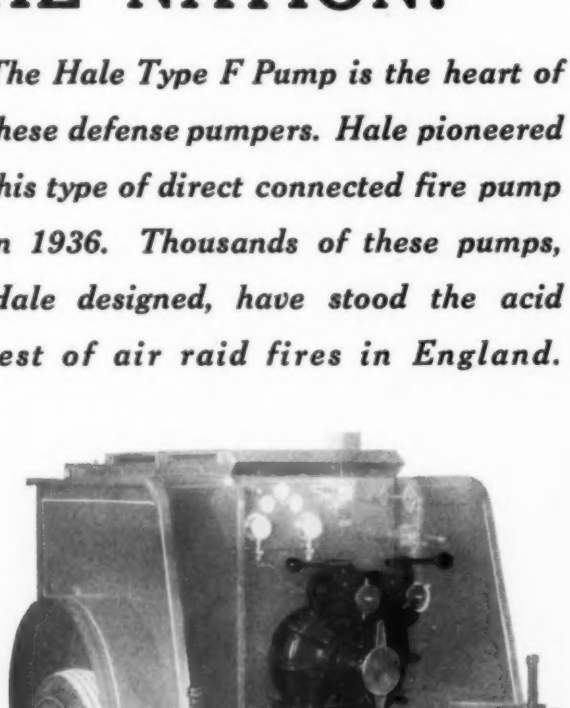
HALE FIRE PUMPS PROTECT THE NATION!



The Hale Type F Pump is the heart of these defense pumpers. Hale pioneered this type of direct connected fire pump in 1936. Thousands of these pumps, Hale designed, have stood the acid test of air raid fires in England.



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Manufacturers of FIRE APPARATUS—Established 1868
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AIR RAID WHISTLES THAT WARN!

FIG. 109 —WITH VALVE

FIG. 114 —VALVE

The Buckeye Plain Brass Whistle is furnished with or without a valve in the base. The stem is securely screwed into the base and supports the bell which can be screwed up or down for adjustment.

FIG. 111 —WITHOUT VALVE

FIG. 110 —WITH VALVE

Buckeye Chime Whistles are also furnished with or without a valve. The bell is cast in one piece so there is no possibility of the parts wearing loose.

FIG. 112 —WITHOUT VALVE

Buckeye Junior Whistles are so designed that they can be promptly installed on any make of car which may be pressed into emergency service.

FIG. 935 —AUTO EXHAUST WHISTLE

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Buckeye Whistles are compelling air-raid signals. They are installed in many of the country's largest cities for just such an emergency. Actual tests show that their shrill, penetrating, unmistakable blasts ***get people off the streets . . . and warn them in their homes!*** They can be operated by steam or compressed air on factories, public buildings, apartments and many other places.

The Buckeye Junior Exhaust Whistles are used on Chiefs' cars, Air-Raid Wardens' cars, Ambulances, Police and other emergency cars. Fig. 937 Whistles (larger) are used on heavy fire apparatus.

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Custom built, heavy duty units with midship-mounted pumps are also available

Due to the present emergency, you may not be able to purchase a new chassis so we suggest

The use of any available chassis, such as shown below, which can be readily fitted with a front mounted Barton-American Fire Pump—the truck still being available for its original service. Booster tank, hose, ladders, etc. can be added if desired.

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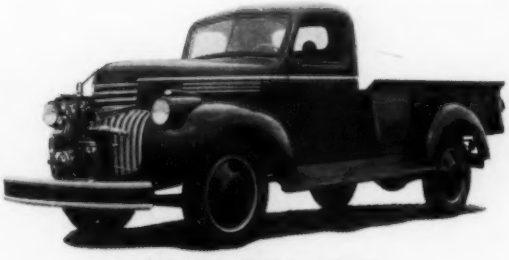

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DEPENDABLE trouble-free operation is built into every Carter Fire Fighter, regardless of size. They are equipped with a Carter Self-priming Centrifugal Pump in use for fire and bilge pump service on marine work.

They are the ideal unit for Civilian Defense work, as a supplemental unit for regular Fire Departments, and for Colleges, Institutions, Airports, Army Cantonments and Industrial Plants.

• SPECIFICATIONS •

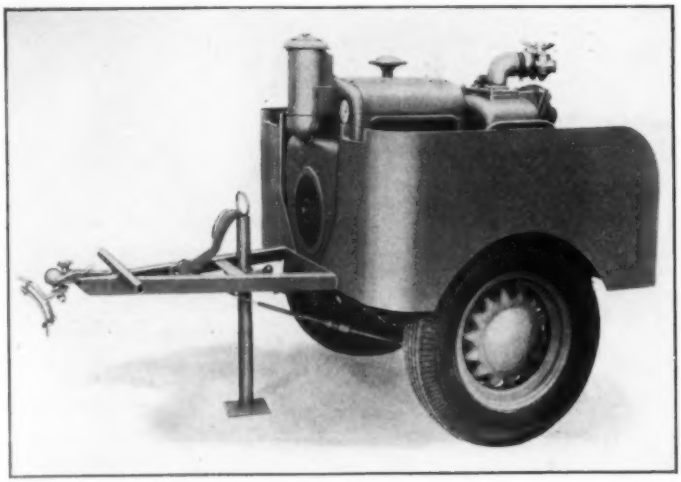
Carter "Fire Fighters" are made in two sizes—"The Warden," 150 G.P.M. and "The Chief," 500 G.P.M. Major specifications covering both units are given below.

CARTER "WARDEN" 150 Gallon Unit

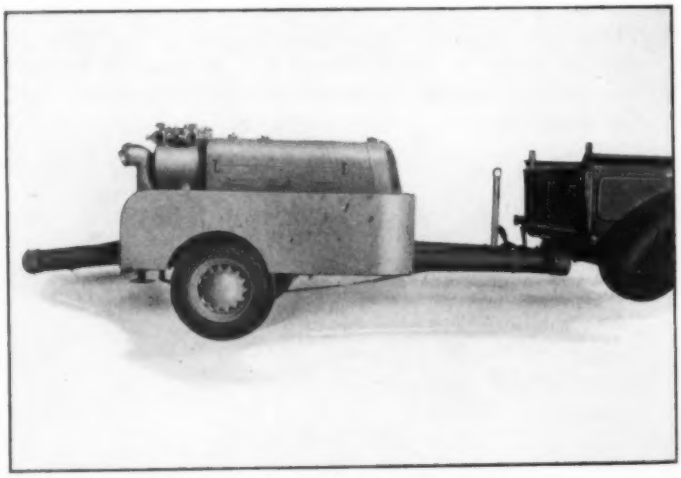
Pump: CARTER Self-Priming Single Stage Centrifugal Pump. Capacity 150 G.P.M. 100 lbs. pressure.
Engine: Wisconsin Motors Corp. 4 cylinder air cooled power unit. Develops 22 H.P. at 2600 R.P.M.
Mounting: 2-4.00x18 Balloon tires, Roller bearing automotive type wheels.
Hitch: Fast coupling "Marvel" ball type trailer coupling.
Hose Carrier: Arranged on each side of unit for carrying total of 500 ft. 1½" (or 250 ft. 2½") fire hose, and 2-12½ ft. lengths of 3" Suction Hose.

CARTER "CHIEF" 500 Gallon Unit

Pump: CARTER Self-Priming Centrifugal Pump. Capacity 500 gal. 120 lbs. pressure. Priming 100% Automatic.
Engine: CARTER Conversion Heavy Duty Industrial Truck Engine. Radiator or heat exchanger cooled. Develops 75 H.P. at 2400 R.P.M.
Starting: Self-Starter generator and heavy duty 17 plate storage battery.
Mounting: 2-6.00x18 Balloon tires, Roller bearing automotive type wheels.
Hitch: Fast coupling "Marvel" ball type trailer coupling.
Hose Carrier: Arranged on each side of unit for carrying total of 600 ft. 2½" fire hose and 2-12½ ft. lengths of 4" suction hose.



Carter "Warden" 150 G.P.M. Pumper



Carter "Chief" 500 G.P.M. Pumper

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FIRE
ENGINEERING

MARCH, 1942 VOL. 95. NO. 3

With the Editor

Mutual Aid That's Not Mutual

Many small city and town Fire Departments are today cooperating in mutual aid plans whereunder they must come to the assistance of large neighboring cities in the event of an air raid.

Mutual aid plans are most commendable, but such cooperation should remain within reasonable limits. The small Department should not be stripped, nor even seriously weakened, in its efforts to aid its neighbor.

The help being given today by the Office of Civilian Defense to larger cities and some smaller cities having defense industries does not extend to the smaller communities having neither defense industries nor other features vital to national defense. The small fire department must thus remain "on its own."

The facts that no federal help is to be given most small cities and towns as noted above, and that help for the large city is being courted among the smaller neighbors can lead to but one conclusion—the small non-defense community is to be sacrificed for the large if heavy air attack is ever experienced. Every development points to such an end, even though no official confirmation has been forthcoming on this point.

It will be well for the Fire Departments of smaller municipalities to keep one eye on local protection, even if it is decided that aid is to be rendered neighboring defense cities.

The thought that fire protection provided for local use by local taxpayers might be called away to operate on fires in other cities while the property it was originally intended to protect is being destroyed by fire seems incongruous. And yet that is just what may happen.

Of course, all interests must be subordinated to national defense, and such a policy may cost some cities far more than others in property loss due to fire. But there is such a thing as civilian morale, which may be seriously affected by destruction of homes.

It seems to us that in all this talk and planning for mutual aid, the rights and needs of the smaller communities should not be overlooked. Give mutual aid as far as it can be safely given—even if it is but "one-way" mutual aid; but maintain local fire protection at the same time. If one must be sacrificed, bear in mind that those who have provided the apparatus and who pay the salaries must be considered. Where no federal aid is forthcoming, the home claim on the department is even greater.

Take Care of Your Apparatus

The extreme difficulty which may be encountered by many cities and towns in replacing apparatus and fire hose makes it imperative that the maximum life be secured from these facilities, and maximum life means the best of servicing and care.

It behooves Fire Departments today to give thorough scrutiny to condition of apparatus and hose and permit no neglect which might shorten its life.

The time and effort given to prolonging the life of these is a real contribution to national defense!

An Added Responsibility

Construction of temporary warehouses may be necessary to provide storage space for lend-lease materials coming off the production lines for which shipping space is not immediately available. The producing factories cannot hold it. The ports must not be blockaded. It must not be loaded in cars unless there is a place to unload it promptly. Public warehouse space may be insufficient or not of the right character. A place must be ready to store this material.

Temporary warehouses will probably be the answer. And as they will likely be federally constructed buildings, local building laws may not be enforced.

Great care should be taken by Fire Department to keep fire hazards in connection with them to a minimum, for overcrowding of stored materials will be common, and concentration of large quantities of inflammable, or even explosive, stores may be encountered. It would be wise to keep an eye on these buildings at all times and thus to be informed on hazardous accumulations of defense materials.

Fred. Sheppard

MAIN LIBRARY FE

Practical Training for Auxiliary Firemen

First of a Series of Articles Devoted to this Important Phase of National Defense

By FRED SHEPPERD
Editor, FIRE ENGINEERING

IN most respects the training of auxiliary firemen parallels very closely the training of rookies for the professional fire service. But one difference has a pronounced effect on the entire procedure of training auxiliaries: the usual absence of practical application of what they learn each day.

For the rookie fireman, through participation in firefighting operations with the company to which he is assigned, has daily opportunity to put into practice those things which he learns in the department school.

The auxiliary fireman, on the other hand, has little or no chance to work at fires; thus he does not have the practical training in evolutions and use of tools that the rookie enjoys.

This difference makes it necessary to give the auxiliary a more thorough and sustained course in training than the rookie, and if continued efficiency in operation is to be had, the auxiliary cannot be permitted to discontinue drilling after prescribed course has been completed. Rather, he must periodically refresh himself from time to time in the work covered by the school.

What the auxiliary must know or be able to do in order to function efficiently is outlined below:

Fire department rules and regulations.
Location of fire alarm boxes in his district.
Location of hydrants.
Sources of water supply, both regular and emergency.
How to send in a fire alarm.
Fire Department tools commonly used, how they are used, and their proper names.
Exact placement of such tools on the apparatus, so that tools may be quickly secured even under "blackout" conditions.
Fire extinguishers and extinguishing agents.
Use of rope and tying of knots.
Use and placement of ladders.
Use and care of fire hose.
Fire streams and their proper operation.

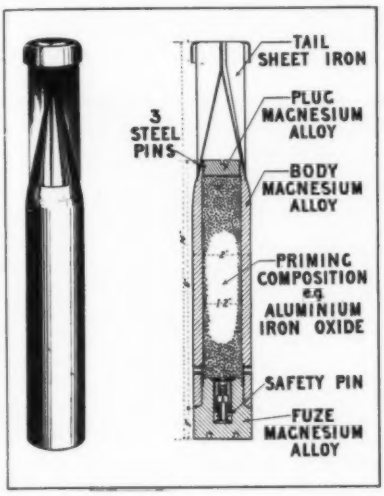
Fire Bomb
The size of a 1 kilogram German incendiary bomb is well illustrated by comparison with the young girl holding it.

Operation of emergency pumping apparatus (trailer pumps, front end pumps, skid pumps).
Identification of aerial bombs.
How to deal with incendiary bombs.
How to extinguish fires.
How to guard against personal injury from common hazards encountered at fires, such as live electrical apparatus and wiring, acids, gases, etc.
Methods of protecting against war gases.
Rescue and first aid work.

Possibly a better understanding of the wide range of work an auxiliary fireman may be called upon to do may be secured by reviewing what may be

Here's What Happens When Water Strikes a Burning Magnesium Bomb

encountered after a "blitz" attack. Of course, at this date no "blitz" attacks



Typical Kilo Magnesium (Electron) Incendiary Bomb

are expected, nor are they possible, in this country. But acquisition of aerial bases near our shores by the enemy would completely change the picture.

Assuming a "blitzkrieg" has taken place, here is what would likely be found:

1. A multiplicity of small fires, caused by incendiary bombs; most of fires burning in attics or cock-lofts.
2. Burning oil, from oil bombs.
3. Ruptured water mains.
4. Broken fire hydrants.
5. Poor water pressure in mains, or no water at all therefrom.
6. Ruptured gas mains, with escaping gas ablaze.
7. Obstructed streets due to demolition of buildings by high explosive bombs.
8. Bomb craters in streets.
9. Badly damaged buildings, some completely levelled.
10. Persons trapped in wrecked buildings.
11. Persons trapped in burning buildings.
12. Power lines down.
13. Presence of unexploded time bombs.
14. Fire alarm and telephone systems out of commission.
15. Fire apparatus in attack area out of commission.

To the above should be added the hazard to personnel resulting from machine gunning by enemy planes, falling fragments of anti-aircraft shells and fragments of bursting high explosive aerial bombs.

The above, while not a complete picture of what may be encountered after aerial attack, may give a fair idea of the difficulties under which the auxiliaries may have to operate.

With the foregoing as a background, it is the aim of the following material to set forth information which may be used with good effect in educating the auxiliaries in the rudiments of their work. This instructional material is presented in the form of questions and answers, for it is believed that such an arrangement of information facilitates the grasp of it by the student.

Questions and Answers on Incendiary Bonds

Q. What types of incendiary bombs may be expected today in aerial warfare?

A. Magnesium (electron metal), thermite, crude oil, phosphorus and sodium-potassium alloys.

Q. Which is the more commonly used?

A. The 1 kilogram (2 lbs. 2 oz.) magnesium bomb.

Q. How large is this bomb?

A. It is approximately 9 inches long and 2 inches in diameter.

Q. What may be said of its appearance?

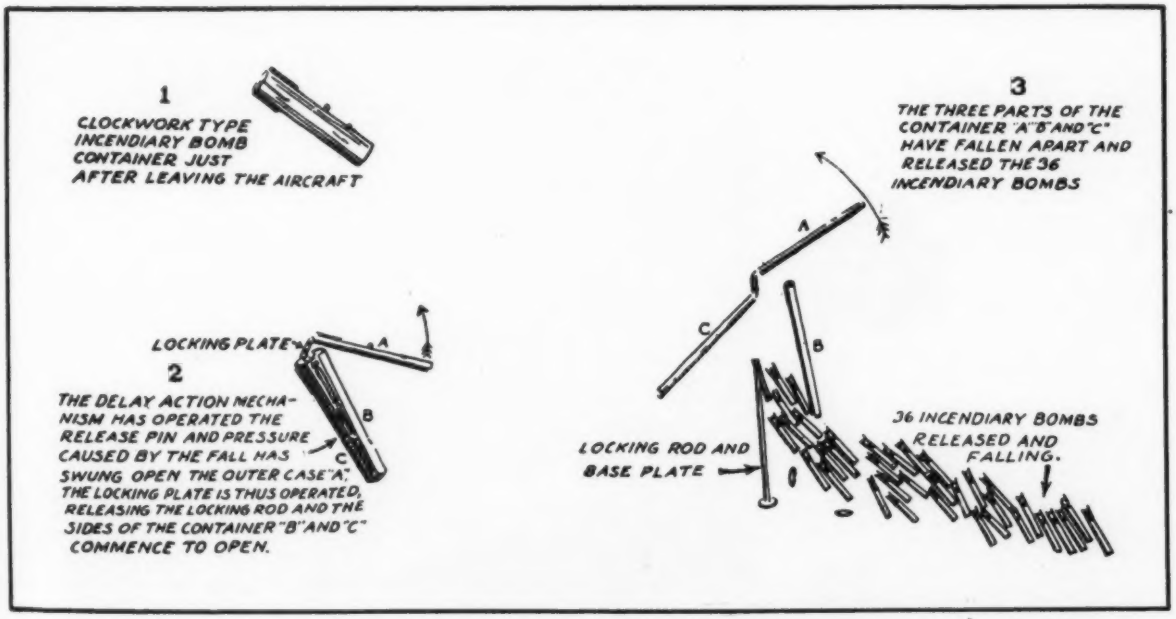
A. It is a white metal cylinder of the dimensions indicated above, and to one end is attached a tailpiece to steady the bomb in flight. The tailpiece is of steel.

Q. Of what composition is the 1 kg. magnesium bomb?

A. It consists of a thick-walled cylinder, made of an alloy of magnesium with a small proportion of aluminum. The cylinder is filled with a priming composition of iron oxide and aluminum dust (thermite), and a percussion cap is provided which ignites the priming mixture.

Q. How does this bomb function?

A. When the bomb hits an object, a firing pin in the end of the bomb is driven into the percussion cap, which "fires" and ignites the priming mixture (thermite). The burning priming mixture ignites


1
CLOCKWORK TYPE
INCENDIARY BOMB
CONTAINER JUST
AFTER LEAVING THE AIRCRAFT
LOCKING PLATE
A
B
C
2
THE DELAY ACTION MECHANISM HAS OPERATED THE RELEASE PIN AND PRESSURE CAUSED BY THE FALL HAS SWUNG OPEN THE OUTER CASE "A". THE LOCKING PLATE IS THUS OPERATED, RELEASING THE LOCKING ROD AND THE SIDES OF THE CONTAINER "B" AND "C" COMMENCE TO OPEN.
3
THE THREE PARTS OF THE CONTAINER "A" "B" AND "C" HAVE FALLEN APART AND RELEASED THE 36 INCENDIARY BOMBS
A
C
B
LOCKING ROD AND
BASE PLATE
36 INCENDIARY BOMBS
RELEASED AND
FALLING.

Sketch Showing How Bomb Container from Dornier Bomber Opens Up, Distributing Its Charge of Incendiary Bombs

Boys in England Receive Practical Training in Extinguishing Incendiary Bomb Fires

the magnesium alloy of which the bomb is made.

Q. How long does the priming mixture burn?

A. About 1 minute.

Q. How long does the bomb burn?

A. Left by itself on a dry surface, the bomb burns about 15 minutes.

Q. If sprayed with water, how long will it burn?

A. One to four minutes.

Q. How much of the bomb burns?

A. All except the tailpiece.

Q. Why are small incendiary bombs, rather than large ones, used?

A. The smaller ones can be scattered over a large area, starting numerous fires. It is more effective to use a large number of small bombs rather than a large one. The destructive effect of incendiary bombs is not measured by the size of the igniting medium, for once fire is started, it gains size by itself.

Q. Are magnesium bombs explosive?

A. A small proportion of those dropped by Axis planes are found to be so, but the explosion they produce is a mild one.

Q. What seems to be the purpose in making some of them explosive?

A. To discourage effective handling of them by defense personnel.

Q. How soon after igniting do they usually explode?

A. Between 1½ and 2-minutes after igniting.

Q. What is the temperature generated by burning magnesium (electron metal) bombs?

A. About 2400 degrees, Fahrenheit.

Q. What is the temperature generated by the burning primer charge (thermite)?

A. About 4500 degrees, Fahrenheit.

Q. Can burning magnesium be extinguished?

A. Yes.

Q. How?

A. By completely excluding air and other sources of oxygen from it.

Q. Can the fire in burning thermite be extinguished?

A. Practically, no.

Q. Why?

A. Thermite contains ingredients which supply necessary oxygen for combustion, and so fire in thermite cannot be smothered. Cooling and quenching agents are either ineffective, or they actually speed up combustion by releasing oxygen in the presence of burning thermite.

Q. Why isn't thermite alone used generally for incendiary bombs?

A. It burns much more rapidly than magnesium, and generates only about one-eighth the amount of heat that would be generated by the burning of an equal weight of magnesium.

Q. What is the effect of moisture on burning magnesium?

A. It increases the intensity of combustion and reduces the time of burning of the bomb.

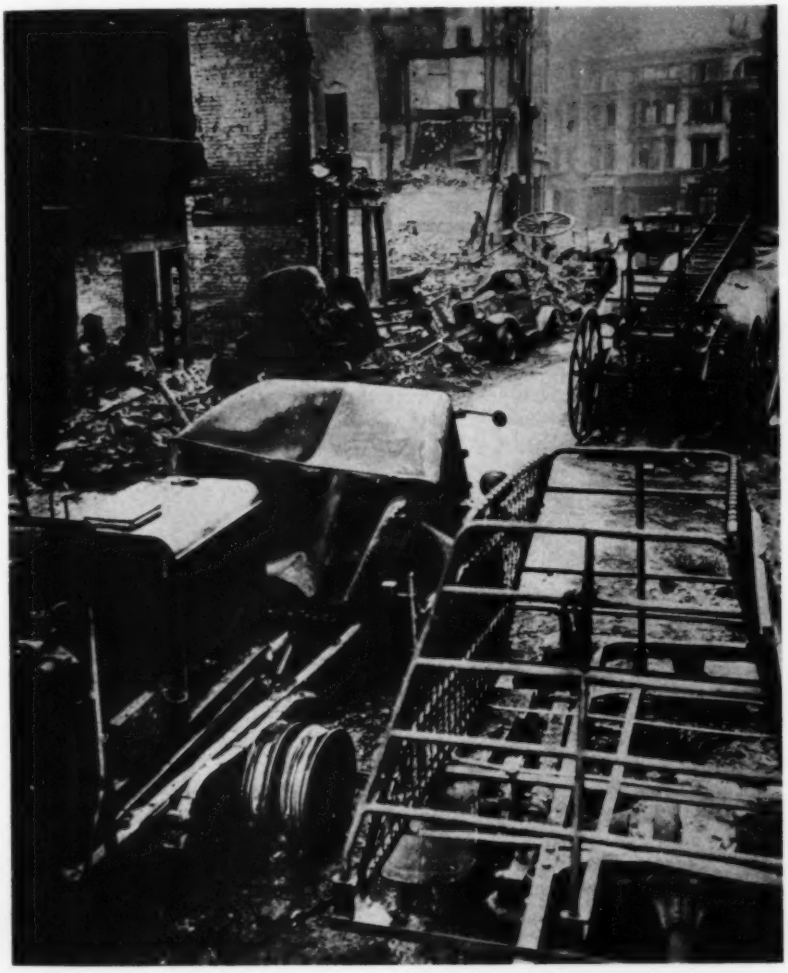
Q. When a magnesium bomb burns on a concrete surface, does it burn quietly?

A. No. The burning magnesium draws moisture from the concrete, and this moisture speeds up combustion of the bomb, and particles

White Plains, N. Y., Air Raid Patrol Shows Proper Way to Operate on Burning Incendiary Bomb. Metal Shield Used to Protect Operator

of molten magnesium are scattered in all directions.

Q. What effect on rate combustion has the burning of a magnesium bomb on wooden flooring?



A Street in a British City After a Blitzkrieg. Note Wrecked Fire Apparatus

A. The heat of combustion will distill off moisture from the wood, which produces an effect similar to that described in the previous question.

Q. How does a magnesium bomb burn on a steel surface?

A. Very quietly and without any pyrotechnic display.

Q. Are the 1 kilogram incendiary bombs dropped singly, or in groups?

A. In groups, or clusters ("sticks").

Q. How many 1 kilogram bombs may be carried in one bomber?

A. From 1,000 to 2,000.

Q. How are they usually carried?

A. In racks. Each rack holds a number of containers ("sticks") and each container, from 10 to 20 bombs. However, in one type of German bomber, carrying approximately 1,000 bombs, the containers are about 39 inches long, and each contains 36 one-kilogram bombs. When the containers are released from the rack, a clockwork mechanism on each starts operating. This mechanism ultimately releases the sections of casing of the container and the container opens up, ejecting the 36 bombs, which fall in a spreading group.

Q. Over how large an area might a single bomber spread its load of 1,000 bombs, and how far apart would fires be started?

A. The size of the area would depend upon the speed at which the bomber is flying, how quickly the bombs are released, and the height from which they are dropped. Handbook No. 4, Fire Services Manual of the Province of Ottawa, estimates that, flying in a straight line, at 200 m.p.h. at a height of 5000 feet and releasing 20 bombs per second, the bomber would drop its 1000 bombs in a little under 3 miles, and would start one fire every 60 to 70 yards.

Q. What percentage of bombs falling would cause fires?

A. 8 to 10 per cent.

Q. At what speed would a 1-kilogram bomb likely fall?

A. Dropped from a height of one mile or more, a 1-kilogram bomb would attain a velocity of about 350 feet per second, which is about one-half the muzzle velocity of an army revolver bullet.

Q. Under the above conditions, about how far would a bomb penetrate a building?

A. It would pass through any ordinary roof, such as slate, tile, or shingle. It is likely to be stopped by the first boarded floor below the roof. If the attic floor is not boarded over, the bomb would probably pass through to the next floor below.

Q. Is there any practical way of stopping the bomb and checking its destructive effect in an attic?

A. Yes. A two-inch layer of sand or a 20-gauge corrugated iron sheeting, raised on non-combustible supports, would accomplish this. But the floor must be strong enough to support the additional load.

Q. Do magnesium bombs, as used by the Axis powers, make a noise when falling?

A. Yes. The small holes drilled in caps of bombs make them "screamers."

Q. When magnesium bombs are burning in the presence of moisture, about how far are sparks thrown?

A. Usually up to about 30 feet.

Q. At what point in a building is an incendiary bomb dropped from a plane most likely to start a fire?

A. In the attic.

Theatre Blaze at Hempstead

A fire which began a few minutes before the afternoon performance destroyed the stage, screen and dressing rooms of the Rivoli Theatre in Hempstead, N. Y., causing damage estimated at $30,000. The fire, which started in the drapes at the side of the proscenium arch, probably was caused by defective wiring. The blaze appeared to be out of control when the apparatus arrived, but the opening the automatic vents in the ceiling created a draft and confined the fire to the stage.

A MESSAGE

to the American Fire Service from

JAMES M. LANDIS
Director, Office of Civilian Defense

THE American Fire Service has undertaken the task of preparing for the hazards of air borne incendiary attacks with a spirit and willingness which are an inspiration to the other civilian protection services. Confronted with the Herculean task of gearing departmental operations to war time tempo and of enrolling and training a large number of auxiliary firemen, most fire departments, from the small volunteer companies in rural areas to the full time departments in our large cities, have met this new challenge by calling on that reservoir of resourcefulness built up through years of peacetime fire fighting operations. In many areas, the fire department has also been given the responsibility of training other protection services such as fire watchers, air raid wardens and auxiliary policemen in the techniques of dealing with incendiary bombs and resulting fires.

James M. Landis

A new problem has arisen to challenge the ingenuity of the American Fire Service as it has never been challenged before. A problem which gives the Fire Service its biggest opportunity to contribute to the successful conclusion of our war effort.

As many of you know, our original plans contemplated the purchase of self propelled pumpers and trailer units to be supplied to localities in need of but unable to provide such equipment. These plans were based on conditions of several months ago. Tremendous demands on the manufacturing capacity and materials of our nation for the production of necessary implements of aggressive warfare have necessitated radical changes in our planning.

The municipalities which will participate in the distribution of auxiliary fire apparatus must now arrange to provide the necessary trucks from vehicles presently in municipal service and from such additional second hand trucks as can be secured through donation or purchase. If trailers are desired their chassis must be constructed locally from such materials as are available. The Office of Civilian Defense will furnish the pumping unit and a full complement of hose, ladders, nozzles and other essential equipment. These pumping units will be either skid units consisting of a motor and a pump, or pumping units for mounting on the front of a truck to be powered by the same motor that propels the vehicle.

The problem confronting the Fire Service is to see that the pumping units and equipment furnished by the Office of Civilian Defense and the trucks and trailers procured locally are brought together so as to make up serviceable pieces of fire fighting apparatus. This will mean the development of a strong cooperative effort in order that hose bodies will be built, pumps mounted, brackets fabricated and equipment placed properly. It is our plan, based on our own experience, to assist in this effort by supplying blue prints and instructions showing how each of these operations can be done successfully.

I feel confident that you will accept this challenge with your usual fighting spirit and lick this problem as you have so many others in the past.

Washington, D. C.
March 3, 1942

James M. Landis,
Director, Office of Civilian Defense.

The above straightforward message to the Fire Service of the Nation was prepared at the invitation of FIRE ENGINEERING. *We urge its careful study, for it comes from a man in our national government with whom we must work in fullest cooperation. Mr. Landis has already shown a thorough understanding of the work of the American Fire Service and wholehearted cooperation is in order.*—The Editor.

S. S. Normandie Destroyed by Fire

Giant French Liner Capsizes After Fire is Brought Under Control

FIRE which swept through the superstructure and a large part of the interior of the big French liner "Normandie" (recently renamed U. S. S. Lafayette upon its acquisition by the United States) on February 9 resulted in what may prove to be the complete destruction of that palatial boat. For a few hours after the fire was extinguished by the New York Fire Department, the ship capsized, and now lies on its side. Whether or not it can be righted and dewatered before irreparable damage is done to the machinery and interior by salt water still remains to be determined.

The capsizing of the ship was apparently caused by uneven loading by water discharged into it by the fire fighting forces.

The fire started at 2:30 p.m. in the main lounge on the promenade deck where a spark from an acetylene torch struck a life preserver filled with kapok. From this point the fire spread rapidly through life preservers, mattresses and other inflammable materials.

The 2,200 men aboard the ship at the time of the fire included 400 sailors, 300 Coast Guardsmen and 1,500 workmen. Survivors said that the fire swept through the main lounge with unbelievable swiftness and that in a few minutes there were no lights nor power.

Fighting the Normandie Fire at Its Height

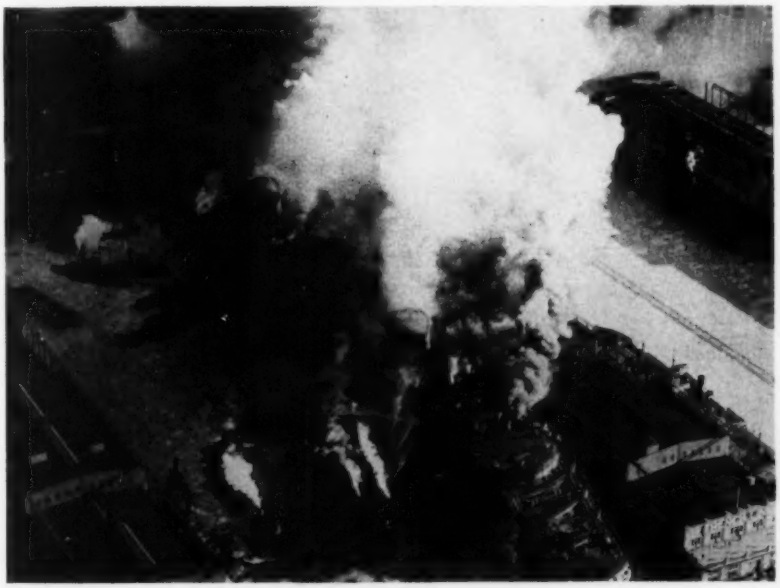
Crews of the first arriving apparatus ran an extension ladder from the street to the bow of the ship seventy-five feet above. Men already were pouring from the ship onto the pier. About 150 gathered on the prow and came down the long ladder in single file.

A lifeboat full of men swung down the side of the ship and into the water which was covered with cakes of floating ice.

Fireboats began arriving at 3:15, sending their streams toward the vessel even before they had taken up position along the vessel's side and stern. Once in position they were hampered by the wind which caught the plumes of water and bent them shoreward.

In battling the fire the Fire Department used thirty-seven pieces of apparatus, twenty-four engines, six hook and ladders, three fireboats, a water tower, a rescue squad, a searchlight squad and a gas and water truck.

From as far north as 104th Street, from as far south as Spring Street—



Aerial View of the Fire Involving the Former Pride of France

a distance two and a half miles either way from the burning ship—the department's five alarms rolled out the trucks, drawing them from both the east and west side of the borough to save the great vessel.

The first alarm was sounded at 2:49 o'clock. Four engines and two hook and ladders from the West Side, between Thirty-eighth and Sixty-third Streets, responded. On water, the fireboat James Duane came north from her Hudson River berth at Thirty-fifth Street.

The second alarm sounded at 3:01 o'clock. Four more engines and one hook and ladder answered this one. The trucks were all from the immediate West Side vicinity except one, which was called over from East Fifty-first Street.

Also responding to the second alarm was the fireboat John J. Harvey, stationed at the Hudson River and Bloomfield Street.

On the third alarm at 3:02 o'clock, five engines and a hook and ladder rolled. This time the department went north to Seventy-seventh Street and south to Seventeenth Street for reinforcements. And the new fireboat Firefighter left her Battery Park station to lend a hand.

The fourth alarm at 3:12 o'clock called five more engines and one more hook and ladder, tapping the East Side for four of these and extending the response area north to Eighty-third Street, south to Twelfth Street

The fifth and last alarm, sounded at 4:10 o'clock, called six engines and one more hook and ladder, including Engine Company 76 from 105 West 102nd Street and Engine Company 30 from 278 Spring Street.

Assistant Fire Chief John J. McCarthy went to the fire and took charge on the second alarm. Four battalion chiefs assisted him. Fire Commissioner Patrick Walsh was on hand for hours, as well as Mayor F. H. LaGuardia.

Seamen's ingenuity stood in good stead when communication between the deck of the burning ship and the firemen operating on the street below became imperative.

Stern View of the Burning Normandie, Showing List in Its Early Stage

No other means being available, sailors, on the bow of the ship, more than seventy-five feet above the street, semaphored the urgent message that more pressure was needed on the water lines. The message was received below by other sailors who operated with the firemen ashore and soon the pressure was increased.

So successful was this method of communication above the din of fire engines, pumps, ambulance sirens and aeroplane motors doning overhead that a sailor was stationed at a lookout post up front during the greater part of the more than six hours that the firemen worked.

The fire was brought under control shortly after seven o'clock. At that time the ship was listing badly, but nearly righted itself around midnight. At the turn of the tide around 3 a.m., the ship again took a list which, aggravated by a strong tide, caused the boat to capsize.

The Normandie was the crowning achievement of the French in the days of gigantic Atlantic liners. Although later surpassed in size by the Cunarder Queen Elizabeth and in performance by the Queen Mary, another Cunard liner, the Normandie was unexcelled in luxury.

Possibly there will not be another such ship, but she will remain a symbol of the days of competition for the Atlantic pennant. She was sponsored by the French government, which paid the $59,000,000 bill for her construction. She was built as the largest and most luxurious vessel

The Normandie Goes to Sleep in the Ice-Coated Water at Her Pier

afloat and proved herself the fastest when she arrived here in 1935 with the blue pennant after a record crossing of four days eleven hours and thirty-three minutes at an average speed of 29.68 knots.

She was 1,029 feet long overall, with a beam of 117.9 feet and a registered gross tonnage of 79,280 tons. She had promenades as wide as city streets, a hospital, drug store, library, theatre, church, shops and a dining salon 100 yards long.

Had Central Fire Station

Also, she had every known device to guard against fire. Cabin partitions were of asbestos laid on duralumin and painted with fireproof paint. Drapes and hangings were fireproofed and thermostatic controls were installed to record any inordinate increase of temperature in any part of the ship. There was a central fire station equipped with indicators for detecting smoke, and an alarm system.

Launched on October 29, 1932, the Normandie was put through speed trials in May, 1935, and was placed in service on May 23, 1935. The French government issued a commemorative stamp, and in New York a special pier was prepared to berth the giant vessel. She sailed on her first voyage on May 20, 1935.

For a few years the Normandie was active in the trans-Atlantic service, and also on cruises to South America and the West Indies, but on August 28, 1939, just before France entered the war, the ship arrived in New York and remained at her pier here, costing the French government $1,000 daily for upkeep.

Title Taken by Navy

Last May 15, the Coast Guard placed a protective guard aboard the Normandie to prevent sabotage, and the following December 12, the French skelton crew was removed and the Navy Department took title to the ship, promising fair compensation to the owners.

When fire ended the vessel's career she was believed to have been stripped of the elegant accessories that made her the world's more decorative vessel. The Navy announced that 2,400 large vans would be required to remove them from the ship and that trucking alone would cost more than $100,000.

To various warehouses went the hand-knotted Aubusson carpet of the main lounge, said to be the largest ever made, with a weight of 1,000 pounds; the golden-yellow Algerian onyx paneling of the main entrance hall, the bronze doors and Coromandel lacquer decorative panels of the smoking room, the faceted glass and metal panels of the main dining room the paintings and tapestries and ornaments of the peace-time Atlantic trade. The total value of the decorations was set at $2,000,000.

Despite the large number of persons aboard the ship at the time the fire occurred, only one life was lost; over 100 persons were injured.

Auxiliaries Given Workout on Fireboat

On February 8 a group of graduate Emergency Auxiliary Firemen of Engine 54, New York City, reported for drill on the fireboat "Duane" at the foot of 35th Street and the North River.

Before instructions began, the boat's commanding officer, Lieutenant John Reagan, explained to the enrollees why they were to be put through a course of fireboat fighting; first he said, they needed to learn the use of the tools that firemen on fireboats work with, as many are very much different from those used by land fire fighting forces. Secondly, the auxiliaries will some day be called down to give help on these fireboats in case of a bombing, as the water front will be the main target of attack by enemies should they succeed in getting over here.

The next day, Monday, February 9, New York City's most disastrous fire happened. The steamship Normandie, docked only fourteen blocks away from the berth of the fireboat "Duane," was going fast with the flames when first due apparatus arrived on the scene.

As the group of fire auxiliary members from the Ninth Battalion were enroute to the big ship fire, it came to this writer's mind the remark of the instructing officer that "Some day we would be needed along our waterfronts to give a hand in fire fighting."

Of course, the big ship fire was not caused by plane invasion, but nevertheless, it gave the appearance of a wartime disaster. There were on hand Red Cross nurses, Salvation Army workers, British-American Ambulances and Canteens, air raid wardens, fire auxiliaries. And also, there were colored national guard members with rifles and bayonets who kept the crowds at a safe distance.

We auxiliary firemen did our bit on the pier by dragging hose and getting tools as needed. As we stood on the dock, you could see the fireboat "Duane" fighting the fire on the Normandie, which later in the night began to list, finally toppling over on her side in the early morning.

From all signs of this ship disaster, I believe our Fire Auxiliary members will need plenty of training and instruction on fireboats and the protection of big ships and piers.

BILL HERRIES

Dog Saves Family from Fire

Snooky, a Boston bull pup, may have saved the lives of seven persons when he awakened them when the foyer of a two-story frame house in Brooklyn, N. Y., took fire. The dog ran through the first-floor apartment awakening the occupants. The people living on the second floor were also awakened by the barking of the dog. Fireman confined the fire to the foyer and the damage was slight.

The dog awakened the father of the one family by barking and tugging at the blankets, after which the pup ran to the other rooms and repeated the process.

Photo by Bill Herries

Fire Auxiliaries Work on Fireboat

A group of graduate auxiliary enrollees from Engine 54 are going through a real workout on the deck of the fireboat "Duane" of New York City. The river was clogged with ice and a cold winter wind blew into the faces of the auxiliaries, but this did not hamper them at their work.

OUR FIREMEN WILL DO THEIR DUTY!

By JOHN EDGAR HOOVER

OUR nation is at war with the Axis aggressors and tremendous responsibilities face the firemen of the cities and towns throughout America. Like the soldier, the sailor, the pilot, and the law enforcement officer, the fireman today holds a position of grave trust in the eyes of his fellow countrymen. Day and night he stands by, ready to respond to any fire which accident, sabotage or enemy bombing may cause.

John Edgar Hoover

Sabotage may take the form of fire. Some fires may be started by arsonists while others are the result of explosives and kindred incendiary devices. There have been several acts of wilful damage committed in the United States, but during the first three months of America's participation in the war, there were no indications of any foreign directed sabotage. Sabotage is a federal crime, and the FBI has primary investigative jurisdiction in these cases.

Special Agents of the FBI and local firemen often work side by side in fires where sabotage is believed to be a possibility. The duty of the firemen is to extinguish the blaze; that of our Agents is to determine how the fire started.

Firemen are experts in their profession and if there is an indication of sabotage an alert fire fighter can be of the utmost aid to Special Agents making the investigation.

The Agents must determine answers to such questions as: At what point did the fire start? Was there an accompanying explosion? Did the fire spread rapidly as though fed by kerosene? What color were the flames? What color was the smoke? Were any telltale containers or fragments of explosives left at the scene? A Laboratory examination of debris found at the point where the fire started may reveal the cause was some form of arson, explosion or of incendiary origin.

Answers to the above questions furnish valuable investigative leads to our Special Agents. Firemen, first public servants to answer the call when a blaze occurs, can be of great service to law enforcement and to the wartime efforts of the United States by cooperating to the fullest extent in these matters.

The people of the United States owe many expressions of gratitude to the courageous firemen who are on constant alert to the danger of life and property from fire—whatever its cause. Risks to their personal safety are countless in number, and daily they devote their lives to meritorious duty.

The Axis challenge has been accepted and we are ready. America's firemen are united with her law enforcement officers, and each is determined that this nation will remain internally secure.

J. Edgar Hoover

Director,
Federal Bureau of Investigation.

Washington, D. C.
March 3, 1942

The Fire Service has always looked upon the work of Mr. Hoover and the F.B.I. with an admiration born of appreciation of a task well done. The above statement to the American Fire Service, prepared at the invitation of this journal, exemplifies Mr. Hoover's thorough insight into the work of American fire departments. He needs no assurance that his Bureau will continue to receive fullest cooperation from the Fire Service. That cooperation will be maintained!—
—The Editor.

Priorities—Their Bearing on Fire Apparatus and Equipment

By A. O. BONIFACE

THE War Production Board (formerly the Office of Production Management) is established *primarily* for the purpose of making sure that all war requirements are met—and met on schedule so far as humanly possible—which means that W.P.B. is required to make certain that all scheduled deliveries of materials which are to go into war products are given a sufficiently high priority rating to insure that all war requirements will be met on schedule, and that materials will be supplied to less essential products only when there is a surplus at the moment not needed for war requirements. High priority ratings are usually limited to the procurement of only just enough materials to make scheduled delivery of "defense orders" as that term is defined in Priorities Regulation No. 1—which definition is more restricted than most purchasers of fire apparatus and fire protective equipment realize.

(b) "Defense Order" means

(1) Any contract of purchase order for material or equipment or equipment to be delivered to, or for the account of:

(i) The Army and Navy of the United States, the United States Maritime Commission, the Panama Canal, the Coast and Geodetic Survey, the Coast Guard, the Civil Aeronautics Authority, the National Advisory Committee for Aeronautics, the Office of Scientific Research and Development;

(ii) The government of any of the following countries: The United Kingdom, Canada, and other Dominions, Crown Colonies and Protectorates of the British Empire, Belgium, China, Greece, the Kingdom of the Netherlands, Norway, Poland, Russia and Yugoslavia.

(2) Any contract or purchase order placed by any agency of the United States Government for material or equipment to be delivered to, or for the account of, the Government of any country listed above, or any other country, including those in the Western Hemisphere, pursuant to the Act of March 11, 1941, entitled "An Act to Promote the Defense of the United States" (Lend-Lease Act).

(3) Any other contract or purchase order to which the Director of Priorities assigns a preference rating of A-10 or higher.

(4) Any contract or purchase order for material or equipment required by the Person placing the same to fill his contracts or purchase orders on hand, provided such material or equipment is to be physically incorporated in material or equipment to be delivered under contracts or purchase orders included under (1), (2) or (3) above

War Products

Some war products have a high blanket priority rating assigned to them (i.e. bombers, tanks, guns, etc.) but in general this rating does not apply to anything but the materials which are actually incorporated in the war product. In addition, each contract issued by the Army or Navy (for other than the foregoing war products) carries a high priority rating, whatever the product may be, whether war products or otherwise. These ratings obviously are higher than industrial ratings, in order to accomplish the primary purpose of W.P.B.

Transportation Equipment

Some transportation equipment, of which there is a shortage, or for which there is an unusual demand to insure a steady flow of war products over-land and over-seas to the fighting forces (e.g. merchant ships, freight cars, locomotives, heavy trucks, etc.) have a high blanket priority rating assigned to them, but this rating does not apply to anything but the materials which are actually incorporated in transportation equipment. Materials for these products take precedence over materials for civilian industrial operations.

Production Machinery, Tools, Etc.

Production machinery, tools, etc., of which there is a shortage (e.g. machine tools, cranes, metal-working equipment, cutting tools, welding machines, etc.) have a high blanket preference rating assigned to them, but in general this rating does not apply to anything but materials which are actually incorporated in production machinery. Obviously, machinery needed for the production of war products takes precedence over machinery needed for civilian industry.

Maintenance and Repair Parts

While new production machinery is scare, W.P.B. has made provision for avoiding disruption of production due to breakdowns of existing machinery by giving materials to be incorporated in maintenance and repair parts for existing machinery a preference rating of A-10 which can be used by any producer (under the limitations stated in the Order) without getting specific authority from W.P.B. This includes the following orders:—P-100 covering industry in general, P-46 covering utilities, P-56 covering mines, etc., etc.

Operating Supplies

The W.P.B. realizes that no production can be carried on without "operating supplies" (i.e. material which is essential to production and which is consumed in the course of such production—but not including machinery or expansion of facilities) and has made provision for avoiding disruption of production resulting from difficulty in securing operating supplies, by giving them a preference rating of A-10 which can be used by any producer (under limitations of the Order) without getting specific authority from W.P.B. The amount of operating supplies to which a concern may apply the preference rating is, however, limited by the orders listed in the preceding paragraph.

Fire Protection, Safety and Health

The W.P.B. officials appear to be thoroughly sold on the idea that devices which prevent slow-down of production by eliminating or minimizing industrial fires, thus permitting every plant to utilize its full equipment and skill every hour of the day, are essential industrial needs as well as essential to the production of war products. Other products favorably considered by W.P.B. officials are health supplies and industrial

safety equipment. As evidence of this favorable attitude W.P.B.: (1) fire protection and safety equipment are handled as a separate branch in the Division of Industrial Operations, as are also health supplies; (2) some of the W.P.B. Conservation Orders specify that the restrictions covered by the order either do not apply in full if at all to products which use scarce materials "to comply with Underwriters' Regulations or Safety Regulations issued under Government authority"; (3) and preference rating orders have already been issued covering health supplies, motorized fire apparatus and fire protection equipment. (An Order covering industrial safety equipment is pending).

W.P.B. Orders Covering Fire Apparatus and Fire Protective Equipment

Product	Preference Rating Order No.	Priority Rating	Limitation Order No
Motorized fire apparatus	P-45 #	A-2	L-43 L-1-c(6)
Fire Protective equipment..	P-108*	A-3 except pipe and pipe fittings A-7	L-39

#Not including: service ladder trucks; squad cars; salvage cars; rescue cars; cars having sedan body; cars having pumps; tanks or hose bodies of other than specified capacity; aerial ladder trucks with fire pumps.

*Including only: portable fire extinguishers; portable foam generators; piped fire extinguishing systems (foam, CO_2 and water spray); automatic sprinkler systems; automatic fire alarm systems; fire hydrants; and indicator posts; couplings, play pipes, spray nozzles and allied fittings; hose racks and hose dryers; lightning rods.

Reference to the notes under the foregoing table will indicate that each Preference Rating Order *is limited* as to type of products to which the order applies. *In addition*, the rating may not be used except to procure materials for filling "defense orders" (See definition in the first paragraph of this article). The latter limitation means that each fire department must apply to W.P.B. for a defense rating for each job, application being made on form PD-1-A. The procedure under which industrial plants will apply for a defense rating for each order of fire protective equipment is not at present available. (Ed. The procedure will be given to readers as soon as available).

Within the limitations specified above, it would appear that it should be a simple matter for producers of fire apparatus and fire protective equipment to procure all the materials they need and that it should be equally simple for such producers to supply readily and promptly all the requirements of all their customers, but, as indicated at the beginning of this article, there are many products carrying rating higher than those available under Orders P-45 and P-108.

Furthermore, no producer of *complete* motorized fire apparatus or fire protective equipment can use Preference Rating Order P-45 or P-108 (1) until he has applied to W.P.B. for permission to operate under the order and has received a serially numbered authority to so operate and (2) until he has stated to W.P.B. (on Form PD-82) the quantity of scarce materials needed to maintain production schedules on defense orders during the current quarter, and has received approval of such production schedule or a modification therefor. He can use such approval only to procure (during the given quarter) the total quantity authorized, and if the quantity is sizeable, he is expected to distribute deliveries over the quarterly period in such a way as will limit his inventory to the minimum practicable inventory which will maintain his current schedules.

No producer of *parts or accessories for* motorized fire apparatus or fire protective equipment can use the Preference Rating Order to secure scarce materials which he may need for producing his accessory until he has received a properly endorsed purchase order from a manufacturer of the *complete* product who has so qualified, and until he (the parts manufacturer) has sent a signed statement to W.P.B. agreeing that in filling the order, he will abide by the terms of the Preference Rating Order mentioned in the endorsement on the purchase order.

It should be noted that in accepting permission to operate under the Preference Rating Order, each party agrees to abide by all of the terms of the Preference Rating Order, including the maintenance of records, the making of periodical reports and all of the basic provisions of the Priorities System which are included in Priorities Regulation #1. This procedure seems rather complicated but in actual operation it isn't (or need not be) as complicated as it sounds. At any rate, it appears to be necessary as a safeguard to W.P.B.'s primary object stated in the first paragraph of this article.

Preference Rating Orders P-45 and P-108 state specifically that the orders are limited to procurement of material "to be physically incorporated into" or "entering into the production of" motorized fire apparatus or fire protective equipment of only those types specifically covered by the respective orders.

Macaroni Plant Makes Hot Fire at Philadelphia

The Kurtz Bros. macaroni plant at Philadelphia, Pa., was reecntly destroyed by fire, entailing a loss of over a quarter-million dollars. Although around two hundred girls were in the plant when the fire department arrived, they were all removed safely.

Except as regards supplies which are of a type which are consumed in fire service, and which W.P.B. may classify as "operating supplies" under Preference Rating Order P-100 (rating A-10), there are no Preference Rating Orders covering fire department supplies. On the other hand, there are Conservation or Limitation Orders applying to materials entering into some supply items; for example, as regards rubber products used by fire departments (fire hose, suction hose, booster hose, washers and gaskets for hose couplings and nozzles, rubber-boots, rubber coats and rubber gloves) the amount of crude rubber which may be used in such products has been, or will be, reduced, which will probably reduce the quantity of these items which can be manufactured; as another example, no copper is permitted for shells of soda-acid extinguishers and no copper-shell soda-acid extinguishers have been manufactured since the first of the year, and when those which were in stock on that date are used up, no more will be available; no brass can be used for the production of locomotive bells.

Conservation of Critical Materials

There are other reasons why the situation is not nearly so simple as it sounds, including the following:—Most fire apparatus and fire protective equipment items use scare materials of one kind or another, each of which is covered by a Conservation Order which states that the use of that material will not be permitted where the use of a less scarce material is practical. Conservation Orders have been issued on aluminum, zinc, lead, synthetic rubber, nickel, natural rubber, some plastics, copper, chromium, tin, etc., which orders include also conservation of the materials which are alloys of such materials, such as tungsten high-speed steel, chrome steel, stainless steel, nickel steel, monel metal, bronze, ordinary brass, and even solder. Some scarce materials are not generally available but are avaliable only on specific allocation.

In addition to limitations laid down by the Conservation Orders, Limitation Orders mentioned in the table above limit the use of certain scarce materials to specified parts of specified types of equipment in which the scarce material serves a necessary functional purpose.

The change-over from one material to another is not always so simple. For example, you can't change from an aluminum stamping to a plastic without much research, development work, testing, etc., and without new presses and dies, etc., which are difficult to obtain because of scarcity of machines, tool steel, and die makers. You can't change from synthetic rubber (e.g. Neoprene) to natural rubber, if the properties required by the synthetic part are not inherent in natural rubber. You can't always go from brass to steel because steel may interefere with proper functioning of the parts. You can't go from one alloy steel to another because it may not have the necessary properties. You can't go from brass to nickel-plated steel because nickel may not be permitted for plating. Of course, research, development and testing involves time, and means a gap in shipments, if one cannot procure enough of the old material in advance of the change-over to carry him through the change-over period.

Priorities Regulation No. 1 which covers the basic rules under which the priorities system is operated specifies that a priority rating may not be used to procure any more than just enough material to meet "the practicable minimum working inventory reasonably necessary to meet deliveries on the basis of current methods and rate of production," further stating that "The term 'practicable minimum working inventory' is to be strictly considered."

Priorities Regulation No. 1 also specifies the sequence in which orders shall be shipped and provides that shipment of lower rated orders must be deferred.

The foregoing will indicate some of the problems confronting manufacturers of fire apparatus and fire protection equipment in their efforts to take care of production at a time when there is an increased demand for equipment, due to plant expansion, the addition of new manufacturing processes in existing plants, and obsolescence of existing fire-fighting equipment.

Philadelphia Has Million Dollar Fire

The city's most destructive fire in eighteen years at Philadelphia, Pa., destroyed a large block of business buildings and homes on February 9, causing damage said to exceed $1,000,000.

A thirty-mile-an-hour north wind sent flames hundreds of feet into the air. Eight alarms were sounded. Forty fire companies and seventy-five pieces of apparatus joined the fight.

Four buildings were destroyed and thirteen others were damaged before the flames were brought under control.

Approximately two hundred persons—most of them firemen—were treated for injuries at the scene. Eleven persons were taken to hospitals. Most seriously hurt was a fireman who received a broken back and crushed foot.

Fifty families were left homeless and 1000 were driven from their homes temporarily by smoke and fear of the fire spreading. Power and light lines fell under coatings of ice.

It was said an explosion preceded the fire which started in the four-story warehouse of the Acme Furniture Company. Owners of the company said their damage alone was more than $200,000.

Guy E. Parsons, the city's chief air-raid warden, called out 250 district wardens to handle the crowds.

City officials said the fire was the city's worst since the $1,000,000 Broad Street Station conflagration of June 11, 1923.

At Least 20 Structures Were Razed and 50 More Were Damaged in a Recent Fire at Philadelphia, Which Brought Eight Alarms

Must Fire Departments Serve Neighboring Communities?

By LEO T. PARKER
Attorney-at-Law, Cincinnati, Ohio

UNDER modern and most certainly changed governmental conditions, a phase of law, highly important to municipal fire department officials, relates to right to refuse the fire department service to property owners outside the city limits. Another important question is: When is municipality legally compelled to extend service under present emergencies?

The situation concerning a number of municipalities at the present time is present and immediate increase and extension of fire protection. In some instances the threatened emergency has resulted in many firms and corporations making inquiries, and in some cases demanding fire protection perhaps only on a temporary basis.

Obviously, if all municipalities were compelled to supply fire protection to all who demand service an impossible situation would exist. While we do not have at hand many future higher court cases which involve the *exact* defense problems of law, we shall review relevant decisions imparting valuable information on the subject.

For illustration, frequently, it has been held that it is the duty of municipal officials to determine when public necessity requires extension of fire protection. Whether or not a municipality can be compelled to extend its service to new industrial firms depends upon the real necessity; the expense involved; and the financial responsibility from the standpoint of governmental requirements.

Of course, under ordinary circumstances, a municipality is not under legal duty to establish an extensive system of fire protection particularly with relation to property owners located in isolated localities, and especially where a franchise, or other contract, does not distinctly specify that such extentions shall be made.

For example, in the leading case of Greenwood v. Provind, 108 So. 284, it was disclosed than an owner of property in a new subdivision instituted legal proceedings to compel a municipality to extend its protection to the new subdivision. In holding the company not required to make the extension, the Court explained the law on this subject as follows:

"We think the question of the extension from one part of the city to another part of the municipality which comprises new territory taken into the corporate limits is within the discretion of the municipal authorities, and unless an abuse in the exercise of their judgment in that regard is manifest, then their decisions of the question are final. Certainly it is the law that a resident of a municipality, living in a remote corner thereof, may not compel the city authorities to protect his premises regardless of the cost, and expense to the city, merely because the citizen resides within the boundaries of the municipality. The extension of the system from one part of the city to another part *depends upon the reasonableness of such extension*, considering the demand for it, the number of subscribers, and the revenue to be obtained."

Therefore, according to this leading higher court decision it would seem that under ordinary circumstances and conditions municipal officials may, in the exercise of reasonably good judgment, refuse to extend fire protection if the prospect for future demand is not in their judgment reasonably good and satisfactory.

Modern Emergency

Considerable discussion has arisen recently with respect to ownership of city streets, and the necessity of municipal officials to provide fire protection to various property owners. Therefore, it is well to explain modern law relative to the ownership of city streets and other public passage ways. Modern courts realize that property owners actually own the streets to the centers thereof. The deeds for real estate *always* include land to the center of the abutting street or highway. However, such property owners have little or no control over the uses of the street part of his land. He pays for it, according to his deed, but he merely holds it in trust for beneficial uses of the public.

For illustration, in Bothwell v. Consumer's Company, 92 Pac. 533, the court said:

"The property owner has no right or franchise in the streets and alleys. . . ."

So, therefore, although a property owner owns to the center of the abutting street yet he has no legal right to install anything in or on the street without permission of the city authority. In other words, the municipality does not own the streets, but it may use and authorize use of such streets to the same degree and extent as if such land actually belonged to it.

Whether the officials of industrial firms may compel a municipality to extend its fire protective service depends upon the reasonableness of the demand. It is certain, however, that if fire protection is needed for *defense* purposes, as where industrial plants producing war materials must have adequate fire protection to operate, the Government officials may compel instant fire and water connections. This may be accomplished by mere order on the emergency basis, or through the agreement to assist the municipality in actually making the extention or defraying the unusual expenses. In cases of this nature the matter of whether the demand is reasonable, from the standpoint of future requirements, is not important nor may valuable time be lost in entering into a discussion about it. The properly authorized Government officials may at all times and under all circumstances demand immediate sacrifice of private property to safeguard the future existence of the Government. Past experiences prove these assertions true. However, after the emergency has passed all municipalities and private property owners, who have sustained financial losses from demands and sacrifices, may present their valid claims which generally are allowable.

Under ordinary circumstances the

provisions of the state constitution controls all acts of municipal officials and, also, the validity of laws enacted by the State Legislature. The latest higher court case on this subject is Ward v. Edy, 6 Ohio Supp. 304.

The facts of this case are that some time in March, 1938, a City Manager became of the opinion that Fire Station Number 8 should be manned entirely by members of the negro race. Notices of a proposed examination having been duly made, on May 12, the Civil Service Commission held an examination and determined the eligibility of 297 persons in the order of their standing in such examination. On June 27, the Council of the City passed an ordinance as an emergency measure, to the effect that the City Manager and the Chief of the Division of Fire were requested and directed to establish and maintain a fire company composed of colored men at No. 8 Fire House.

Suit was filed and the court was requested to grant an injunction against the said No. 8 Fire House being manned exclusively by negroes.

During the trial considerable testimony was introduced regarding the effect of certain state statutes and constitutional provisions.

First, it was shown that a state law provides that from the returns of examinations the commission shall prepare an eligible list of the persons whose general average is not less than the minimums fixed by the rules of the commission and, that such persons shall take rank upon the eligible list as candidates "in the order of their relative excellence as determined by the examination."

This law was enacted by authority of the state constitution which provides:

"Appointments and promotions in the civil service of the state, the several counties, and cities shall be made according to merit and fitness, to be ascertained as far as practicable by competitive examinations."

It is important to know that the higher court granted an injunction against the Fire House being manned exclusively by negroes. This court said:

"Courts ought not to interfere with the acts of executive or administrative officers unless such act be clearly beyond their power, but in this case it is clear that the procedure adopted by the officials of the city is in direct violation of the plain provisions of the charter. An administrative officer may often with propriety do that which is not in strict conformity with the provisions of the statute upon the theory that conditions are such that administrative efficiency could not otherwise be had and that the public welfare requires it. It appears clearly that this is the motive which prompted this exercise of power. But when such matter is brought before the courts and the power of the officer is challenged, the courts dare not be influenced by any such consideration. Courts must declare the law as they find it and apply it to the facts as they are."

Therefore, according to this decision the courts may *only* interpret or construe *valid* laws. If a law is void it is unnecessary for the court to interpret it. If the law is deemed valid, then the court may interpret the ambigious meaning and construe its provisions. But, it must be remembered that under no circumstances may a court add to or subtract from the provisions of a law. This is so because the various higher courts have held that all public and private property become clothed with a public interest especially when used in a manner to make it of particular public consequence. Thus understood when property is affected with a public interest it is within the exercise of the police power. This means that property owners have dedicated their property to a public use. Actually it is merely another way of saying that if one embarks in a business which public interest demands shall be regulated and, he must know in advance the regulations that will ensue. This law was upheld by the United States Supreme Court in Munn v. Illinois, 95 U. S. 113.

Important Decisions

When considering private property with relation to public interests, which shall prevail? That is an important question. If, for example, private property prevails to the final detriment of public government then, under these circumstances, not only is government likely to be extinct, but with it, also, will follow extinction of private ownership of real property and all other valuable and property ownership.

For these reasons, not only of law, but based upon common sense, it must follow that private property and governmental property, including county, municipal and state holdings, must for existence concede to emergency regulations. This is a matter of self preservation. If one falls, the other likewise becomes extinct. And in order that both shall survive, one must succumb to the will and disipline of the other. From the natural force of events and presently effective legal principles the one less superior must bow to the will of the other. Since the Federal Government is paramount, its will is superior.

On the other hand, with respect to the duty and obligation of a court to construe laws, the late and modern case of Ward v. Edy, is important particularly because this decision holds that a court may render its decision in accordance with its *opinion* as to what was meant by the law making body which formulated the law being litigated. And while this case is not related to the duty of municipalities to extend fire protection, yet since new law is presented by this late decision, it is apparent that when interpreting a law to determine whether fire protection shall be extended the court may decide what it believed to have been the intended meaning of the law making body, instead of rendering the decision strictly based upon the exact provisions of the law.

Fire Fighting Apparatus and Personnel at Camp Upton, N. Y.

Polished to a high lustre, both men and equipment of the Camp Upton Fire Department are ready for a Saturday morning inspection. Pictured from left to right are Pvt. LeRoy Hunt, Sergt. Edward Mello, Private Joseph Madden, Corp. John Blecka, Captain C. A. Rycraft, who serves as Fire Marshal; Corp. Pat Stafford, Corp. Thomas Ganley, Pvt. 1st Class Herbert Sweet, Pvt. John Leuschner, Pvt. Stanley Stanislaus, Pvt. George Boughton, Pvt. Edgar Myers and former Chief F. A. Bell. The department's mascot, "Buttons," is seated in one of the trucks.

Obviously, this law is not applicable when the necessity for fire protection, in order to safeguard industrial plants enaged in production of defense merchandise, is being considered. As above explained government officials may be empowered and authorized to require immediate extension of fire protection and extraordinary service on the part of municipal fire departments.

Review of Modern Decisions

During the past few weeks the higher courts have rendered several important decisions pertaining to the authority of Congress to enact valid regulations applicable to emergency procedure. Therefore, we shall briefly review these important cases, as follows:

The fact that interstate and intrastate transactions are commingled does not affect the power of Congress to control and define the rights of citizens and municipalities with respect to the same. See Carver, 41 F. Supp. 60.

Under all circumstances the Federal laws supersede laws and regulations of states and municipalities. See Union, 118 Pac. (2d) 148.

Employment is interstate exclusively when the employe is working on any device or apparatus being used or intended to be used in interstate commerce. See Erie, 22 Atl. (2d) 116.

A citizen is anyone who is entitled to all of the rights and privileges prescribed by the United States constitution, and he must have the same rights and privileges enjoyed by other citizens. See, U. S. 40 Fed. Supp. 777.

A corporation which is an agency of the government is not the "government" nor an "officer" nor a "department" of the government. See, Salant, 41 Fed. Supp. 13.

"False claims" against the United States Government include any conspiracy, as where open bidding on a project is interferred with. And the guilty party may be convicted. See, U. S. 41 Fed. Supp. 197.

In order that a suit may be filed against the United States it is necessary that, first, the complaining party shall obtain consent to file the suit. This consent must be obtained from the proper legal representative of the Government. See, U. S. 21 Fed. (2d) 732. In this case a property owner sued the United States for the value of his property which was seized by government officials and used for defense purposes. However, since the property owner had failed to obtain consent to file the suit, the higher court refused to render its decision in favor of the property owner.

The legal authority of any officer representing the United States Government must be received solely from Congress. And claimed authority not properly authorized is false and illegal. See, King, 3 So. (2d) 572.

Although a suit cannot be filed against the United States Government, unless valid consent is obtained to file the suit, this law is not effective with respect to officers and agents of the government. In other words, if a representative of the government is negligent and effects damage, the damaged party may file suit and recover damages from the guilty party. See, Zin. 299 N.W. 685. This law is applicable to all public officials. They are expected by law to exercise at least an "ordinary" degree of care to fulfill their duties and obligations to the public.

When construing the legal meaning of a clause in a constitution, the courts always endeavor to decide the intended meaning of the people who adopted the constitution. See, Newark, 22 Atl. (2d) 570. And contrary to the opinion of a majority of persons a constitution of a *limitation* of power rather than a *grant* of power.

Any agreement is valid whereby the United States, through one of its departments, contracts with a municipality to share a portion or all of the expenses in extending a fire department service, or a water system, or a sewage system, or the like, and furthermore a provision of valid by which the municipality shall have full ownership of the improvement at a specified subsequent date, as when the government no longer requires use of the improvement. See, State, 4 So. (2d) 662.

Chief J. A. Falkner Retires

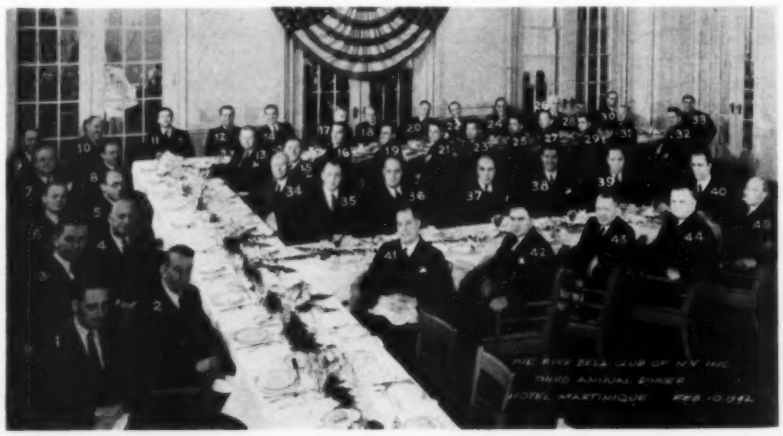
Chief J. A. Falkner of the South Euclid, Ohio, Fire Department recently retired after serving twenty years in the Department, the past eighteen years of which were as Chief. He recently reached his seventy-first birthday.

New York Bell Club Holds Annual Dinner

The third anniversary dinner of the Fire Bell Club of New York was held February 10, in the Martinique Hotel. This year members only were in attendance. Due to the national emergency and the fact that practically all of the members are enrolled in the Telegraph Dispatching branch of the Fire Department Auxiliary Corps and thus subject to call, the dinner was informal and no guests were invited. The club, located next to Truck 24 in West 33rd street, is equipped with fire alarm telegraph tapper and radio attuned to the Fire Department's wavelength at 1630 kc.

Active membership in the club does not extend to those of the Fire Department. Recently a member of the club was appointed a Fireman. His status then became Guest Member, without vote.

JERRY DALY.



New York Fire Bell Club Gathers for Annual Dinner

Those in the photograph are numbered thus: 1—Wm. H. Down; 2—Edgar Clarke; 3—Thos. Baxter; 4—Julian Lyon; 5—Dr. Abel Kaufman; 6—Louis Sanford; 7—Ben. Branch; 8—Hugh H. Blair; 9—Peter Erkelenz; 10—Howard Diehl; 11—Lester Fisher; 12—Jos. Hirschmann; 13—Howard C. Haggerty; 14—Allen M. Kridel; 15—Jerry Adelsdorfer; 16—John Carmody; 17—Jerry Daly; 18—Rev. Fred. Frohnhoefer, S.J.; 19—Philip Brady; 20—Harry Pusch (President); 21—Wm. Smith; 22—Jos. Murtha (Treasurer); 23—Wm. Leavy; 24—Frank W. Kridel; 25—John Sarno; 26—Edw. M. Salomon; 27—Matt. Lomasney; 28—Al. Dreyfous; 29—John Price; 30—Paul Andrews (Secretary); 31—Edward G. Cashman; 32—John J. Cashman; 33—Abe Gordon; 34—Herman W. Schutte; 35—Al. Roehn; 36—Lauritz Schou; 37—Edw. J. Jagger; 38—Herbert S. Weil; 39—Geo. M. Morley; 40—Carl Lillie; 41—Edw. Miller; 42—Jos. N. Pauker; 43—Sterling Helmick; 44—Jack Mullen; 45—Edw. Pancoast (Marshal).

Members not present—Wm. Baer; Frank Brannigan; Lewis L. Crane; Adrian Durieu; Edw. Luz; Gordon Mullins; Dr. Geo. Schwartz; Dan. Reidy; Dr. John F. Connell; Mike Furster; James Parker; Morris Heitowit; Rev. Merritt E. Yeager, Fire Chaplain.

Preparing Auxiliaries for Service

A Symposium on the Training Programs for Auxiliary Firemen of a Selected Group of Cities near the Seaboard

FIRE Departments in cities along the Atlantic and Pacific seaboards have lost no time in instituting programs for the training of auxiliary firemen since war was declared on this country.

In most of the cities reporting, very complete courses of instruction have been developed and put into operation. And highly significant is the emphasis placed on practical evolutions and drills in the use of fire fighting tools.

It is apparent that the necessity of fundamental training for volunteer recruits is generally recognized, for most curriculums are built around practical instruction in elementary subjects relating to fire fighting operations.

Of particular interest is the plan followed by some of the Fire Departments reporting of requiring graduates of the course to return periodically for "refresher" courses. This plan insures against the Auxiliaries going stale or forgetting much of what they have learned. Unless the auxiliaries have opportunity to work at fires, and thus keep brushed up on the use of apparatus and appliances, "refresher" courses are vital.

A lot of usable information is included in this symposium—information that will prove helpful to Fire Departments now in the process of organizing auxiliary training courses.

Portland, Me.
O. T. Sanborn, Chief

We are trying to meet the requirements set up by the Government, but they are changing so often that it is rather difficult. At the present time we require fifteen hours on fire department work, five hours on gases and five hours on incendiaries.

The fire department work covers the following: Lesson I—Rules and regulations; house watch; receiving and responding to alarms; salvage operations; fire fighting in general, including ventilation, opening up, direction of fire streams, etc. Lesson II—Apparatus, tools and equipment. Lesson III—Types, care and use of extinguishers. Lesson IV—Care of hose, loading apparatus, use at fires. Lessons V and VI—Hose evolutions. Lesson VII—Ladder evolutions.

Baltimore, Md.
Howard Travers, Chief

Our auxiliary training course consists of twelve sessions of two hours each. It includes instruction on handling hose, operating hose lines under various conditions, climbing ladders, knots, rescue operations, and attacking fires under various circumstances.

Our auxiliaries are trained in the use of all equipment used in regular service.

Under the supervision of a departmental official, we find that they are able to perform elementary fire fighting operations.

Jacksonville, Fla.
W. O. Dowling, Chief

Our training course consists of ten two-hour sessions for general firemanship and five two-hour sessions for first aid. One two-hour class is required for each auxiliary fireman each week. After completion of firemanship and first aid, three two-hour classes are required for incendiaries and their extinguishment.

General firemanship comprises the following evolutions: hose work, ladder work, engine operation, organization of regular fire force, rescue work and fire prevention.

Some of the auxiliary firemen have become very proficient in the handling of tools and equipment as a result of the training they have received from the fire department instructors in tools, appliances, ladders and hose line equipment.

Upon completion of the prescribed course, the auxiliary is able to handle incipient fires; also he is able and well qualified to replace regular men in the service.

In addition to conducting surveys of all industrial plants, hospitals, large department stores, office buildings, hotels, etc., our firemen are organizing and training a fire brigade for each such establishment among the employees and officials, if approval and the necessary cooperation of the management can be obtained. This work is carried out along the plan of the National Board of Fire Underwriters.

There are fifty-eight voting precincts in this city and for each such area we are now organizing groups of men equalling thirty-five to seventy-five, the number contingent upon the resident population therein. These men are designated as fire watchers and given training which is helpful when called upon to fight fires caused by incendiary agents and other causes. Men from the regular fire fighting force capable of imparting the necessary training and information are sent before the precinct groups whenever and wherever they meet.

Atlanta, Ga.
C. C. Styron, Chief

Our courses takes thirty-two hours divided as follows: ten hours of Red Cross work, five hours of regular drill work for firemen and seventeen hours of general fire fighting instructions.

All phases of general fire fighting, care and operation of tools and equipment, incendiary bombs and war gases are included in the course.

When the men are registered with the Civilian Defense Office as auxiliary firemen, they are requested to report to their nearest fire station for instructions. Special classes are conducted by each of our twenty fire stations and a large number of citizens are enrolled at each station. The two Fulton County Fire Stations, under the supervision of this department, are cooperating by training these civilians.

New Haven, Conn.
Paul P. Heinz, Chief

Our course has only begun. We expect to have eight sessions, each two hours in duration. We expect to teach the chemistry of fire, practical training in the handling of magnesium fires, hose and ladder evolutions, pump operation, etc.

Norfolk, Va.
Edw. J. Cannon, Chief

Company schools and drills consisting of two-hour sessions are held once a week. The course includes the saving and preservation of human life; ventilation; handling of fires in hotels, theatres, hospitals, churches, public assembly halls, apartments, dwelling houses; incendiarism; back draughts; heated gases and smoke; overhauling; rekindles and the fundamentals of fire fighting. Company drills consisting of eighteen evolutions essential for auxiliary firemen are held.

The men are taught to handle tools, appliances, ladders; to stretch hose lines consisting of 1-inch, 1½-inch and 2½-inch, using water with different size tips and other appliances necessary in combatting fires.

I am of the opinion that the auxiliaries will be able to perform elementary fire fighting operations satisfactorily upon completion of the prescribed course.

Portland, Oregon
Edward Grenfell, Chief

Auxiliary firemen are expected to attend ten sessions, or about twenty hours. After being trained, auxiliary companies hold regular drills.

They are taught how to make hose connections, stretch hose lines, operate nozzles, place ladders, do other simple evolutions in the fundamentals of fire fighting. Lectures and demonstrations on the control of incendiary bombs are given.

I believe auxiliaries upon completion of their course should hold drills at least twice a month.

We now have 2,100 auxiliary firemen trained and expect to train 900 more.

Philadelphia, Pa.

Act. Batt. Chief Frank A. Rowe, Co-Ordinator of Fire Defense

We give a preliminary course which consists of fourteen periods of two hours each covering the organization of the Bureau of Fire; various kinds of companies and the duties of each; alarms, signals, etc.; hazards and precautions at fires; knots and hitches; tools and their uses; tying of tools; hose line exercise; care and operation of chemical tanks; demonstration of various types of extinguishers and recharging of same; proper extinguishing agent to use on the various types of fires; care and operation of low pressure hydrants, making suction connections, laying hose lines, how to advance hose lines in buildings; wetting down and overhauling; lecture on operation of pipe line companies, water towers, fire boats, high pressure pumping system; operation of high pressure hydrant, use of 3-way and Paradox hose pipe holder; placing play pipe outfit in service; lecture on both sprinkler and standpipe systems, operation of each; gas masks and rescue work; placing portable ladders in service; demonstration of placing aerial ladder in service; further explanation of the duties of truck companies and various tools carried on same; first aid, including arterial pressure points, tourniquet, artificial respiration, Thomas arm and leg splint, other emergency methods of application of improvised splints, use of triangular bandages, etc.

We give a special course on the chemistry of fire which is an illustrated lecture and demonstration and takes two and a half hours. Another lecture and demonstration lasting four hours is given on the operation and care of the 500-gallon trailer pump.

Three of our officers who have completed the Chemical Warfare Course at Edgewood Arsenal are also giving our auxiliary firemen a three hour lecture and demonstration on incendiary bomb control and gas protection.

Boston, Mass.

Samuel J. Pope, Chief

The course of instruction for Boston auxiliary firemen covers thirty sessions of two hours' duration. Courses are conducted both day and evening.

Auxiliary firemen also take course in first aid. These courses take ten nights at two hours each night. The instructors are officers in the Boston Fire Department who have themselves completed the Red Cross First Aid Course.

Auxiliary firemen are also instructed in the operation of pumps. The Pump School is conducted by Engineer James Ryan of the Boston Fire Department, and candidates for our auxiliary fire force, upon completion of their regular course, attend this pump school. We have at present about 300 graduates of this school.

The auxiliaries are also trained in the handling of different types of bombs and gases and in decontamination. Refresher courses are conducted weekly for graduates at the houses to which they are assigned.

The regular course of instruction is as follows:

First day—Men are lined up and instructed in the proper drill movements to meet the requirements for roll call. Men are instructed in regard to their duties in the fire department. Instructions are given on tools and appliances. Men are lined up for roll call each day.

Second day—Instructions on tools and appliances. Knots and knots tied. Instructions on various lights carried in the fire department, and lights put in operation.

Third day—Instructions on extinguishers. The type of fire each extinguisher is used for. Extinguishers charged and refilled. Knots tied. Instruction on the use of hose lines, spanners.

Fourth day—Thirty-foot ladder. Men are instructed on the construction of ladder. Men are instructed on holding and raising ladder. Thirty-foot ladder raised by three men, and placed against balcony fire escape, ladder taken down and men change positions. Men instructed on locking left leg in ladder.

Fifth day—Thirty-foot ladder raised, placed against balcony fire escape, ladder taken down and men change positions. Men instructed on raising and turning ladder, ladder raised to balcony fire escape, taken out, turned and lowered. Men change positions. Men are instructed on going over ladder.

Sixth day—Thirty-foot ladder raised, turned and placed against balcony fire escape, ladder taken down and men change positions. Men instructed on dogging ladder to balcony fire esceape, each man dogs ladder with one and two dog chains. Men over thirty-foot ladder, up balcony fire escape to roof, and down ladder to yard.

Seventh day—Thirty-foot ladder raised and dogged. Men instructed on roof ladder and its use; roof ladder carried over thirty-foot ladder by two men and raised to balcony fire escape above, ladder hooked on top of fence, first man over ladder, second man holds ladder, ladder taken down, and men change positions. Men over thirty-foot ladder, up balcony fire escape ladder to roof, and down ladder to yard.

Eighth day—Thirty-foot ladder raised and dogged, roof ladder carried over thirty-foot ladder hooked on balcony above, both men over roof ladder, ladder taken down, men change positions. Men over thirty-foot ladder, up fire escape ladder to roof, and down through tower to yard.

Ninth day—Thirty-foot ladder raised and dogged, roof ladder carried over thirty-foot ladder, hooked on balcony above, men over roof ladder, ladder taken down and men change positions. Forty-foot ladder. Men are instructed on the construction of ladder, how to hold ladder when raising. Ladder raised by six men, tip extended, placed in window, crotch poles set, ladder taken down, and men change positions.

Tenth day—Forty-foot ladder raised by six men, tip extended, placed in window, ladder taken down, men change positions. Men instructed on dogging ladder to window with one and two dog chains. Men over forty-foot ladder, up through tower to roof, and down fire escape to yard. Men instructed on carrying ladders in various positions.

Eleventh day—Forty-foot ladder raised by six men, tip extended, placed in window, ladder taken down, and men change positions.

Fifty-foot ladder. Ladder raised by eight men, tip extended, placed in window, ladder taken down, men change positions. Men over fifty-foot ladder up through tower to roof, and down re escape ladder to yard.

Twelfth day—Fifty-foot ladder raised, tip extended, placed in window, ladder taken down, men change positions. Men over fire-escape ladder to roof, down through tower, and down fifty-foot ladder to yard.

Thirteenth day — 75-foot ladder raised. Ladder raised by nine men, tip extended, placed in window, ladder taken down, men change positions. Men over 75-foot ladder, up through tower to roof, down balcony fire-escape ladder to yard.

Fourteenth day—Instructions on the care of hose. Hose changed on wagon one side at a time in drill yard. Instructions on connecting pump to hydrants. Instructions on Post, Lowery, and High Pressure Hydrant. Instructions on opening and closing gates.

Fifteenth day—Hose used for drill about five lengths. Hose made up in yard. Thirty-foot ladder raised to balcony fire-escape and dogged. Men instructed on carrying hose on right shoulder, and the proper distance for each man. Hose carried over thirty-foot ladder up fire-escape ladder to roof, man with pipe will place pipe over edge of roof, one man on each balcony of fire-escape, slack of hose let down, hose lines put on, hose straightened in yard. At each evolution the hose will be connected to hydrant. Hose made up and men change positions.

Sixteenth day—Fifty-foot ladder raised and dogged, hose carried over fifty-foot ladder, man with pipe in window, up tower to window above, second man in window, and light up on slack, third man on ladder outside of window, fourth man on ladder at splice of ladder, fifth man five rungs from bottom of ladder, place pipe out window, slack let down, hose lines put on, hose straightened out in yard, hose made up and men change positions.

Seventeenth day—Thirty-foot ladder raised and dogged to fire-escape. Hose carried over thirty foot ladder, up fire-escape ladder to roof, slack let down, hose lines put on, hose made up, men change positions. Fifty-foot ladder raised and dogged to window, hose carried over fifty foot ladder and up tower to window above, pipe placed out window, slack let down, hose lines put on, hose made up and men change positions.

Eighteenth day—Instructions on hauling hose and thirty-foot ladder to roof. Thirty-foot ladder raised to fire-escape and dogged. Half of company to go to roof, one man to carry hauling line, one man to carry hose hoist, hose hoist made fast to edge of roof, hauling line lowered over hose hoist to yard and made fast to hose about six feet from play pipe, hose hauled to roof, hose let down, hauling line made fast to thirty-foot ladder about two-thirds from butt of ladder, and ladder hauled to roof, ladder let down, men change positions. Half hitch will be placed on play pipe when hose is being lowered. Half hitch will be placed on spar of ladder at tip when ladder is lowered to yard.

Nineteenth day—Sixty-five foot ladder raised and dogged to window. Hose carried over sixty-five foot ladder and up tower to window above, pipe placed out window, slack let down, hose lines put on, hose made up and men change positions. Instructions on carrying pompier

ladder over sixty-five foot ladder, pompier ladder carried by two men, life belts put on, life belts hooked on spar of pompier ladder, hook of life belt placed on right side, both men up sixty-five foot ladder, when top of sixty-five foot ladder is reached, left arms are placed around right spar of ladder holding pompier ladder, men remove hooks from pompier ladder and hook on to rung of sixty-five foot ladder, men lay back on belts, first man raises pompier ladder to window above, placing hook on window sill, first man up pompier ladder, second man up to top of sixty-five foot ladder, both men hook on, at the command OUT both men lay back, arms stretched out looking up, at the command DOWN both men unhook and return to their original positions. Pompier ladder taken down from window, hooks placed on spar of pompier ladder, men take ladder down and change positions.

Twentieth day—Instructions on passing water through play pipe, cellar pipes, bresnan nozzle, deck guns and portable guns. Instruction on booster pump. Tower raised and water passed through tower, instructions on tower.

Twenty-first day — Instructions on opening windows, doors, skylights, breaking glass and ventilation. Aerial ladder driven in yard, men instructed on raising and lowering ladder, men over ladder to roof and down fire-escape ladder to yard.

Twenty-second day—Instruction on the use of pompier ladders and life nets. Chain pompier ladder to fifth floor window, ladders taken down, men change positions. Single pompier ladder to fifth floor window. Instructions on holding life nets. Jump in life nets, jump made from second floor window.

Twenty-third day—Chain pompier to ninth floor window, ladders taken down, men change positions. Single pompier to ninth floor window.

Twenty-fourth day—Chain and single pompier to ninth floor window.

Twenty-fifth day—Chain and single pompier to ninth floor window. Instructions on line lines and life belts. Single rope slide from fifth floor window.

Twenty-sixth day—Single and double rope slide from fifth floor window. Instructions on gas masks, masks used in SMOKE HOUSE. Instructions on tools and appliances carried on Rescue Companies.

Twenty-seventh day—Single and double rope slide from eight story window. Instructions on carrying persons down ladders, men take turns in carrying.

Twenty-eight day—Raising of thirty, forty, fifty and sixty-five foot ladders. instructions on first aid.

Twenty-ninth day—Roof ladder carried over thirty-foot ladder. Hose carried over fire-escape ladder to roof, hose carried over sixty-five foot ladder, hose and thirty-foot ladder raised to roof. Pompier ladder carried over sixty-five foot ladder.

Thirtieth day—Aerial ladder raised, men over aerial ladder to roof, down fire-escape ladder to yard. Chain and single pompier to ninth floor window. Single and double rope slide from eight story window. Carry down thirty-foot ladder, jump in life net, review on hydrants, tools and appliances knots.

Thirty-first day—Exhibition drill for Fire Commissioner and Chief of Department.

Wilmington, Del.

William J. Lutz, Chief

The first course consists of first aid instruction; the second of instruction on chemical warfare, followed by nine sessions of two hours' duration on fire department work.

At the first session evolutions are performed by the regular force, and thereafter the auxiliary firemen perform the actual operations. We find that they are very much interested in the training work, and are exceptionally eager to perform their duties in a uniform manner.

The following instruction is given to the Auxiliary Civilian Fire Defense Corps:

Lesson 1—Responsibilities of a fireman responding to a fire, including the saving of life and safety of men, sizing up the situation at the fire, location of the fire, occupancy of the building, weather conditions; the truck company duties, including the saving of life and investigating the building for same, ventilate building but make sure the engine companies have water, raising of ladders and the proper places to raise ladders, make sure all occupants of building are aroused and out of building.

Lesson 2—The Engine company duties: Draughting water, including the height of lift, length of the suction hose, placing the pumper in a safe place, the importance of checking for tight connections, protection of the suction strainer, making the suction strainer secure with the proper knots, the importance of keeping the suction submerged, protection of suction from vibration.

Lesson 3—Stretching in of hose from hydrant or pumper, including drafting position at a fire, proper end of hose at hydrant or pumper, hose line as close to the curb as possible to prevent being run over as much as possible, proper way to roll sections (single and double), proper way to line apparatus with hose, proper time to open nozzle at fire when fire can be seen, proper way to open and close nozzle.

Lesson 4—What does care of fire hose in service include—protection from oil and greases, prevent friction on the outside of jacket, changing of hose regularly, drying hose before placing in apparatus, handling of frozen hose, proper drying, protect from acids, protect from burning sparks and embers, protect from too great a pressure, protect against shutting off of nozzle too suddenly, protect couplings, protect against running over by vehicles when under pressure or when flat, care of gaskets and why, care of hose while doing salvage work, roll hose properly, proper laying of hose, working hose lines off ladder.

Lesson 5—Proper tying of fire bureau knots, including the bowline, timber hitch, bucket hitch, double bowline, rolling hitch, half hitch, weaver knot, flat knot.

Lesson 6—Discuss the benefits of ventilation and why it is necessary to ventilate, including how to handle backdrafts, how to allow firemen to work to a better advantage, safety of firemen, reduce smoke loss, how to confine fire, how to release dangerous gases, how to enable firemen to reach scene of fire, how to reduce loss from heat and water, how to aid rescue work from building, how to stop mushrooming of smoke and gas.

Lesson 7—Types of extinguishers in Bureau of fire, including soda and acid, foam, carbon dioxide, carbon tetrachloride, Indian water pump, dry bicarbonate of soda, sand, and the properties of each type of extinguishing agent.

Lesson 8—Different types of ladders in fire bureau, including extension ladders such as the automatic aerial and the ground extension; truss ladders such as ground extension and straight truss and solid beam ladders such as ground extension, collapsible, pompier, roof and hook.

Lessin 9—Removing of ladders from apparatus—First they must be unlocked. Taken out straight side down. Turn toward officer to place cradle side down and laid on ground on line with window to enter. Raise and turn from building. All ladders should be placed as fire bureau rules: One fifth of length of ladder and add two feet, making it suitable for climbing and working. Tip should enter window for stability. If ice is on pavement ladder should be tied at butt to prevent slipping or dropping.

In raising an extension ladder care must be taken to see that the dogs are locked on both beams and rope tied at the base of ladder for safety. Protection of hands.

Climbing ladders. Use the beam for guide to protect the hands. Walk, do not pull yourself up. Descend the same way. Not more than one man to every ten feet of ladder at one time.

Saving of life by ladders. Rescued person able to descend ladders must be preceded by a fireman to prevent person from falling. Arms and legs of persons carried must be free from ladder to prevent them from grabbing and fouling the carrier.

Man power. Men required to raise ladders vary according to ladder size. For ladders twenty to twenty-five feet, two men are required; for thirty-foot ladder, three men are required; for thirty-five foot ladder, four men are required; for forty-five to fifty-foot ladders, six men are required and for seventy-five foot aerial, four men are required.

Providence, R. I.

Thomas H. Cotter, Chief

A complete course of instruction in firemanship is being given the auxiliary firemen in Providence. Initial instruction consists of attendance two nights a week for a period of seven weeks and one night a week thereafter. Each night's instruction lasts one and a half hours.

The following is our course of instruction.

First night—Men shall be instructed to fall in for roll call in accordance with Rules and Regulations of the Department. Roll call shall be held at each drill. Explain in detail the duties of the man on house patrol. Method of receiving alarms, companies responding to alarms, and covering of companies.

Second night—Instructions on the care of apparatus in quarters. Apparatus responding to fires. Location of apparatus at fires. Apparatus returning from fires. Riding on apparatus.

Third night—Instructions on extinguishers. The type of fire that each

(*Continued on page* 184)

Ninety-Three Items for Defense

By WALT MESSENGER

WHILE firemen sprayed water on surrounding woodwork, others frantically searched cars for a wrench with which to shut off the gas line in the cellar. A pipe had sprung a leak where it entered an oven and a scorching flame seared the woodwork behind the stove. Since that day a gas shut-off wrench has been one of the tools carried among the ninety-three items of fire fighting equipment packed into the car of County Fire Defense Chief Howard L. Humes of Saratoga County, New York.

For a quarter of a century fire fighting has been the main hobby of Chief Humes. As a fire warden he combats grass and forest fires. As chief, or assistant chief of the Ballston Spa Fire Department, he fights fires in dwellings, business places and factories in the village. And through this quarter century he has collected together an assortment of tools with which to attack and master the enemy, fire.

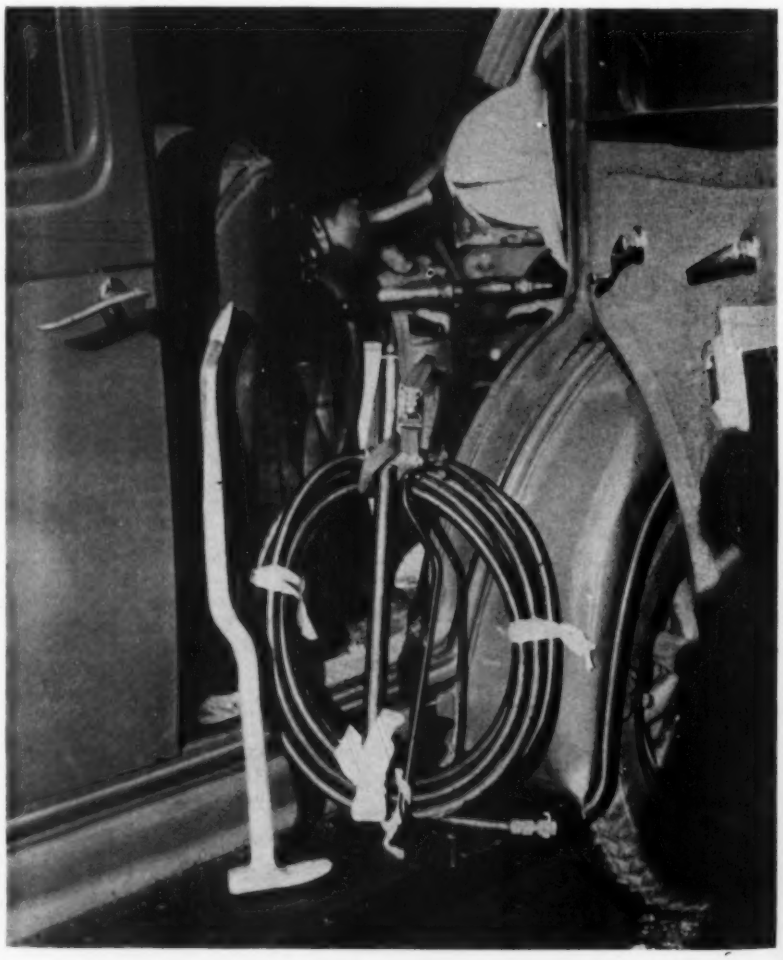
The inventory carried cannot be classified along any definite lines. For forest and grass fires there are the four five gallon Indian Pumps, six fire pails, seven short shovels, two push brooms, twenty burlap bags and a double bit axe. But many of these are handy tools at village fires, too. The Indian Pump is always a handy extinguisher to start work with and if you get into action quickly enough it is often all that is needed. The burlap bags, when filled with sand will dam up a small forest stream. They can also be used to stop the spread of burning oil.

During the fall and winter many village fires are chimney fires. For these two pounds of Sambo are always in the car, ready. Also a special chimney nozzle for use on a booster line. The ninety feet of seven-eighths inch manila rope often comes in handy to pull the booster hose to the top of the chimney and might be listed under this type of equipment.

Special material is also carried for use in fighting oil and gasoline fires. A pound of dry chemical has its place in the car. Also a gallon carbon tetrachloride pump extinguisher. Fog nozzles for the Indian pumps and for the booster line can be used in combating and smothering this type of surface fire. The bags previously mentioned, filled with sand can be used to confine or guide burning liquid where it will do the least damage. This same equipment is used in case of automobile and truck fires.

Many small items are stored in the car that are used only occasionally. Some duplicate material is carried by the pumpers, but all have at one time or another been of great value in cutting down fire loss. There is a special partition nozzle, a wrecking bar and door opener, a small pinch bar, an adjustable hydrant wrench, pike axe, tow rope, tin roof cutter, hammer and cold chisel, one inch extension bit and brace (used to let water through a floor) a double saw that cuts either fine or coarse, a nine foot pike pole, a rail cutter, goggles and a large stone cutting hammer. And, on top of the car is a combination ladder that can become an eighteen foot extension, two ten foot single or a ten foot step ladder.

For even more general purposes a half mile Carpenter electric lantern and an electric traffic torch are carried. Sprinkler shut-offs, twelve of them, designed by Mr. Humes can be used to check water damage by shut-



A Glance Into the Rear Seat

An English type stirrup pump and a wrecking bar are on the running board. Inside can be seen Indian Pumps, helmet, half-mile electric light and the extension bit and brace.

ting off factory sprinkler heads as rapidly as they are no longer needed, yet before it is advisable to turn off the main supply. A pound of ten and a pound of twenty penny nails are also carried. A first aid kit and rubber gloves are often found useful. A four foot half inch pipe and a thermometer registering up to 800 degrees Fahrenheit are used to check the fire hazards in hay mows and coal piles. A camera with a photo-flash attachment is carried for picturing evidence in arson cases.

The latest addition is a stirrup pump, English air raid precaution type, which fits into the new needs caused by war. This pump, in combination with the fire pails was used only recently for a chimney fire outside the village limits and found to be excellent.

Altogether Mr. Humes carries ninety-three items of equipment in and on this one-man fire department and this does not count the red light on top nor the siren that opens his path through traffic. Local home owners are yearly saving thousands of dollars worth of damage because the chief gets there first with the right tools to hit the fire before it gains headway. Local taxpayers are also saved many dollars annually because Mr. Humes and his well equipped car answers silent alarms and he is able to complete many small jobs without calling the full department out. An additional saving to both taxpayers and home owners can be traced to years of training in fire fighting that Mr. Humes has given to the men of the Ballston Spa Volunteer Department. Fires are often fought before they occur, on the blackboard in the firehouse. The men are told how to use their tools. They are given actual outdoor practice in the use of those tools running all the way from throwing water onto a fire to the use of salvage covers, drains and mops to lessen water damage.

Incendiary bombs are new to American life, they must be dealt with according to a new technique. But the fire which they cause is the same old enemy we have always had and have been fighting since the beginning of our national existence. So it is natural that when Saratoga County picks a County Fire Defense Chief, they chose the man who has spent a quarter of a century or more preparing for that very job.

County Fire Defense Chief Howard L. Humes and the Car That Carries 93 Separate Pieces of Fire Fighting Equipment

He is ready for everything from chimney fires, through forest fires to incendiary bombs.

MASSACHUSETTS CHIEFS DISCUSS EQUIPMENT AND PRIORITIES

Need for Appliances and Equipment for Auxiliaries Stressed

By Alton Blackington

AN unusually enthusiastic meeting of the Massachusetts Fire Chiefs Club was held Jan. 21 at the Parker House in Boston, with nearly 100 chiefs from all parts of the Commonwealth in attendance. President Robert Tappen of Gardner welcomed the guests and visiting chiefs from other New England states and presented the two principal speakers, Fire Co-ordinator for Massachusetts, Persy Charnock and Asst. Director of Public Safety, Norman Macdonald.

Mr. Charnock touched briefly upon the recent Lynn holocaust where 13 lost their lives, and pointed out that in the event of an air raid and incendiary bombing, there might be dozens of similar fires with scores of persons trapped in the flaming buildings. The need of a large force of well trained auxiliary firemen was illustrated by this single North Shore tragedy.

While some progress have been in various cities there still remains a lot of work to be done. Auxiliary groups that expected to be furnished with credentials, boots, coats, helmets, etc., have lost interest in the training courses because they have no equipment to work with. One of the greatest problems is to keep up the interest of the auxiliary fireman after he has been trained. Because nothing has happened to date many think that nothing will and the apathetic attitude of the public is one of the greatest problems that the fire departments have to solve.

"One question that every chief wants to know" said Mr. Charnock is the 'How—when and where—of the additional apparatus that we so sadly need." To shed light on the question of priorities and bottlenecks, production and distribution, Mr. Charnock presented Mr. Norman MacDonald, Assistant Director of Public Safety, who gave the chiefs as much information on the aforementioned subjects as is available.

The most pressing need of the moment was a clarifying statement from the powers-that-be—regarding appropriations by town and city governments, and some definite information as to the calibre and extent of government help in the way of heavy apparatus and equipment. Mr. MacDonald expresed the belief that coats, helmets, boots, badges, gas masks, etc., would be furnished by the government in the near future. "No one can say at this time just what the quantity will be—or when it will be distributed, but the government is definitely planning on this assistance to the fire departments of New England."

Priority problems and blackout regulations were discussed and many helpful suggestions were made. At the conclusion of the lively roundtable discussion, Percy Bugbee of the N.F.P.A. read an illuminating letter from the chief of the Honolulu fire department describing the difficulties and dangers encounted by his department during the bombings early in December.

Fire Department Needs Becoming Acute

Apparatus on Order Delayed in Delivery by Defense Requirements; Uniform Design Would Help

IN the tabulation below, which represents the first installment of a survey of fire department needs throughout the country, the number of instances where delivery of fire apparatus is being held up by priorities or other causes is conspicuous.

Priorities will delay completion of some orders until defense requirements are first met, but ultimate delivery is probable.

But delays due to special design features required by Fire Departments are equally large. Inability of the apparatus builder to secure special parts or materials, additional work called for in already overcrowded engineering departments, and additional work needed of skilled artisans to build the machines all contribute to the delay in completing an order. The solution to this problem would be the ordering of fire engines of manufacturers' standard design, eliminating for the period of the war the many innovations desired by different Fire Departments.

There is no immediate solution to the priorities bottleneck. Fire apparatus for Army and Navy and defense areas must have first consideration. But these needs will be met ultimately, and orders for municipalities can then have undivided attention. Patience, in the meantime, is in order.

In the following tabulation, which includes only cities of 25,000 population and over, it will be noted that but a small part of the apparatus and equipment needed is expected to be purchased. Fire Chiefs should, however, continue to ask for these needed improvements. For if there should be an enemy air raid in this country and a number of large fires started, there will be plenty of buck-passing by city officials. While no "blitzkrieg" is expected, there may be occasional raids by planes carrying incendiary bombs, and a single bomber can start a lot of fires.

If the Fire Department is on record as having urged improvements, which the city administration vetoed, the blame for uncontrolled fires will be placed where it belongs.

As noted above, the first installment of the tabulation on apparatus needs covers only cities of 25,000 population or more. The second portion, to be published next month, will include cities between 5,000 and 25,000 population.

The Editor wishes to express his appreciation to the many Fire Chiefs who have cooperated in making this information available to the fire service.

(A) Emergency apparatus and equipment purchased in 1940. (B) Additional apparatus and equipment needed. (C) Apparatus and equipment to be purchased during current year.

Over 100,000 Population

Birmingham, Ala.
(A) 2 750-gal. pumpers
(B) None. (C) Not reported

Long Beach, Calif.
(A) New Station built; personnel added; 1,000 gal. triple comb. pumper
(B) 8 750-gal. pumpers (2 should be quads); 8,000 feet 2½-inch hose; 5,000 feet 1½-inch hose; 300 gas masks
(C) 2 750-gal. pumpers; 8,000 feet of 2½-inch hose; 5,000 feet of 1½-inch hose

Oakland, Calif.
(A) 2 1250-gal. pumpers; 4 hose wagons with 1,000 gal. Invincible nozzle
(B) Not reported. (C) Not reported

New Haven, Conn.
(A) 5 kw. motor generator unit for fire alarm telegraph div.; fire boat equipped with 750-gal. pump and 2 deck guns; 1 85-foot steel aerial ladder truck; 1 500-gal. pumping unit for emergency work equipped with resuscitator, inhalator, cutting torch, gas masks, etc.; 1 quad-comb. 500-gal. pumping unit; 9 fog nozzles; 1 500-gal. triple comb. pumping engine; 7,000 ft. hose (5,000 ft. 2½-inch and 2,000 ft. 1½-inch)
(B) 48 trailer pumps
(C) 1 quad-comb.; 1 500-gal. triple comb.; 4,000 ft. of hose

Washintgon, D. C.
(A) None
(B) 1 aerial truck; 1 hose wagon; 1 pumping engine; trailer pump and equip. for auxiliary fire fighting force
(C) Not reported

Jacksonville, Fla.
(A) 1 750-gal. pumper; 1 65-ft. aerial truck hook & ladder
(B) 3 1,000-gal. pumpers; 3 750-gal. pumpers; 1 aerial; 2 service hook & ladder trucks; 1 fire boat
(C) 1 750-gal. pumper and 1 1,000-gal. pumper

Miami, Fla.
(A) 1 quad
(B) 5 1,000-gal. pumpers; 100 100-gal. pumps to put on city dump and other trucks
(C) Not reported

Atlanta, Ga.
(A) 5 addl. fire stations equipped with 1,000-gal. pumpers; 5 addl. 1,000-gal. pumpers; 1 750-gal. comb. pumper; 1 65-ft. automatic aerial; 1 100-ft. automatic aerial; 1 chief's car
(B) 2 asst. chiefs' cars; 1 100-ft. automatic aerial; 1 1,000-gal. pumper; fire hose; 1 line truck; 1 floodlight truck; 50 tarpaulins
(C) Fire hose; 1 chief's car; 1 100-ft. aerial truck

Fort Wayne, Ind.
(A) 5 750-gal. pumpers; 5,500 ft. of hose
(B) Modernize two aerial trucks
(C) 750-gal. pumper; 2 1,000-gal. pumpers

Gary, Ind.
(A) 2 1,000-gal. pumping engines; 1 100-ft. aerial truck; 3,000 ft. 2½-in. hose; nozzles; 1,250 light unit; small equip.
(B) Several small trailer pumps
(C) Not reported

South Bend, Ind.
(A) 100-ft. steel aerial; hose tender carrying 1,000 ft. 3-in. hose; 10 addl. fog pipes.
(B) 1 service truck. (C) 1 service truck

Des Moines, Ia.
(A) Full complement of 1½-inch hose & nozzles; shut-off nozzles; 8 6-hr. oxygen masks; 6 portable light plants; first aid kits
(B) 6 750-gal. pumps; 10,000 ft. 2½-in. hose; 3,000 ft. 1½-in. hose; 1 rescue wagon
(C) 2 750-gal. pumps

Kansas City, Kans.
(A) 2 750-gal. pumpers; 4,200 ft. 2½-in. hose; 2,000 ft. 1½-in. hose; 600 ft. booster hose
(B) 1 city service truck with 100 gal. booster tank; 4,000 ft. 2½-in. hose
(C) 4,000 ft. 2½-in. hose

Wichita, Kans.
(A) Quad truck; 750-gal. pumper
(B) Addl. quads or pumpers
(C) 750-gal. pumper

Baltimore, Md.
(A) 8 tractors; 2 pumpers; 1 squad car
(B) Not reported. (C) Not reported

Boston, Mass.
(A) 7 portable pumps
(B) 250 addl. portable pumps; 14 addl. serial trucks; 14 addl. triple comb.; 2 jr. aerials; 2 fire boats. (C) Possibly all listed above

Somerville, Mass.
(A) None
(B) Portable pumps; 2½-in. and 1½-in. hose
(C) Not reported

Worcester, Mass.
(A) 1,000 gal. pumper contracted for; cutting outfit; 12 all-service masks; 24 hand lights; 6 shut-off nozzles; 1 ladder pipe; 1 wire cutter; 5 spray nozzle applicators; 24 stirrup pumps; 1 heavy duty deluge set; hose
(B) Portable trailer pumps; addl. hose
(C) Not reported

Detroit, Mich.
(A) Small equipment such as fire hose, pump tanks, fog nozzles, monitor nozzles; repair parts for Telegraph Bureau, rubber coats, boots and helmets
(B) 120 500-gal. pumping engines; 300,000 ft. hose; 300 nozzles; extinguishers, axes, ladders, addl. firemen
(C) 50,000 ft. hose; small engines and other small equipment

Flint, Mich.
(A) 1 750-gal. pumper
(B) 2 pumps; 1 ladder truck. (C) None

Grand Rapids, Mich.
(A) 1 500-gal. pumper with 200-gal. booster tank, 1½-in. hose and 1,000 ft. 2½-in. hose
(B) Pumping equipment for 3 new stations
(C) Not reported

Minneapolis, Minn.
(A) 2 1,000-gal. pumpers (ordered but not yet delivered)
(B) 5 1,000-gal. pumpers; 1 85-ft. aerial ladder truck; 1 rescue squad truck
(C) Not reported

St. Paul, Minn.
(A) None
(B) Equipment and apparatuns for 63 auxiliary fire stations
(C) 1 1,000-gal. pumper; 1 750-gal. pumper

St. Louis, Mo.
(A) 6 pumpers; 2 aerial trucks; 1 chief's car; 1 deputy chief's car; 11 battalion chiefs' cars
(B) Several service trucks
(C) 2 pumpers and 1 aerial truck

Omaha, Neb.
(A) 2 750-gal. pumpers; 1 100-ft. aerial
(B) 10 pumpers; 2 city service trucks; 1 addl. rescue unit and 1 crash truck for airport
(C) 1 750-gal. pumper ordered; crash truck

Rochester, N. Y.
(A) 12 pumps
(B) 18 pumpers; 2 aerial trucks
(C) Possibly pumpers

Syracuse, N. Y.
(A) 1 100-ft. metal aerial ladder truck; 1 1½-ton light and squad truck

(B) 3 100-ft. metal aerial ladder trucks; 3 or 4 pumpers of 1,000 to 1,200-gal. capacity; 1 light and squad truck.
(C) All-service gas masks; addl. lighting units; inhalator; fire hats, rubber coats, boots and other accessories and equipment

Utica, N. Y.
(A) 2 1,250-gal. triple comb. pumpers
(B) 2 1,250-gal. triple comb. pumpers; 32 500-gal. pumpers; 96,000 ft. 1½-in. hose; 108 nozzles and adapters; 100,000 gas masks; 1,000 knapsack pumps
(C) Possibly 2 1,250-gal. triple comb. pumpers

Yonkers, N. Y.
(A) 6,000-feet 2½-in. hose; 1 gas. driven motor generator for supplying power to fire alarm boxes
(B) 2 1,500-gal. pumpers; gas masks; stirrup pumps; knapsack pumps; fire axes; shovels
(C) All listed above

Akron, Ohio
(A) None
(B) 3 1,000-gal. pumpers; 6 750-gal. pumpers; 2 hose wagons with turret nozzles and booster tanks to carry 1,000 ft. 3-in. hose; 1 75-ft. aerial truck; 1 linesman's truck fully equipped; 7,000 ft. 2½-in. hose; 3,000 ft. 3-in. hose; 3 new stations with 750-gal. pumper each
(C) A levy is to be voted, but there is nothing definite

Canton, Ohio
(A) None
(B) 3 new pumpers requested; 8,000-ft. 3½-in. hose; 2 small trucks for first aid; 1 2-way radio; establishment of 1 additional truck co. using quad; 86 fire alarm boxes and other miscellaneous equipment
(C) Not reported

Dayton, Ohio
(A) 2 750-gal. pumpers and 1 100-ft. aerial truck
(B) Rescue squad fully equipped; trailer pumpers; gas masks; inhalators; hose; play pipes
(C) Not reported

Toledo, Ohio
(A) 2 750-gal. pumpers
(B) 3 trailer pumps; 1 rescue squad fully equipped; 1 85-ft. aerial truck; 2 750-gal. pumpers; 8 all-service masks; 2 fresh air masks; 1 foam generator; 10 CO_2 extinguishers; 4 inhalators
(C) Not reported

Oklahoma City, Okla.
(A) 3 emergency tank pumpers with 150-gal. capacity and 500-gal. of water; 1 light 500-gal. pumper was ordered
(B) Replacement of 10 750-gal. pumpers; 4 new 500-gal. pumpers; replacement of 3 city service trucks with 65-ft. aerials
(C) Not reported

Tulsa, Okla.
(A) CO_2 extinguishers; fire hose and hand pumps
(B) 3 aerial trucks; 3 pumpers; 7,500-ft. hose
(C) All

Portland, Ore.
(A) 8 hose trucks
(B) 75 500-gal. pumpers; 50,000 ft. hose
(C) 20,000 ft. hose

Philadelphia, Pa.
(A) 29 triple comb. hose and pumpers; 9 85-ft. aerial trucks
(B) 2 85-ft. aerial trucks; 12 chem. hose cars
(C) All

Pittsburgh, Pa.
(A) None
(B) 2 100-ft. aerial ladder trucks: 2 85-ft. aerial trucks; 7 1,000-gal. trip. comb. pumpers; 2 65-ft. service aerials; 1 squad wagon
(C) 1,000-gal. triple comb. pumpers

Reading, Penna.
(A) 2 600-gal. pumpers
(B) 1 aerial; several pumpers; auxiliary pumpers
(C) 1 new pumper

Knoxville, Tenn.
(A) 3 1-hr. breathing masks; 1 inhalator
(B) 3 750-gal. pumper; 12 500-gal. trailer pumpers; 21 250-gal. trailer pumpers; 1 100-ft. aerial ladder truck; 3 65-ft. aerial trucks; 8 hose trucks
(C) None

Memphis, Tenn.
(A) 5 1,000-gal. pumpers; 1 1,500-gal. pumper; 1 100-ft. aerial, 2 quads on order; 8,000 ft. 2½-in. hose, 5,000 ft. 1½-in. hose, 2,000 ft. ¾-in. hose received; 12,000 ft. 2½-in. hose, 3,500 ft. 1½-in. hose, 5,000 ft. ¾-in. hose on order; new fire station
(B) Extra piece of equipment to match every one now in service
(C) Not reported

Nashville, Tenn.
(A) None
(B) 10 pumpers; 5 service trucks, 1 aerial truck
(C) Bond issue now for 5 pumpers, 1 service truck and 1 aerial truck

Dallas, Tex.
(A) 1 750-gal. pumper
(B) 5 service trucks; 2 1,000-gal. pumpers; 9 750-gal. pumpers; 25,000 ft. 2½-in. hose; 10,000 ft. 1½-in. hose
(C) Not reported

Fort Worth, Tex.
(A) 6 750-gal. pumpers; 100-gal. booster tank and full complement of equipment
(B) 6 city service trucks fully equipped; 1 aerial truck; 1 rescue and squad truck; 4 500-gal. pumpers and large boosters; 4 1,000-gal. pumpers; hose; life saving equipment
(C) Not reported

Houston, Tex.
(A) 7 coupe automobiles, 3 750-gal. pumpers, 2 city service trucks, 1 rescue truck delivered; 5 750-gal. pumpers, 2 100-ft. aerial trucks and 2 65-ft. aerial trucks now under contract
(B) 10 pumpers; 8 city service trucks
(C) 5 pumpers; 4 city service trucks

San Antonio, Tex.
(A) 2 750-gal. pumpers; 14,000 ft. hose
(B) 30 pumpers; 72,000 ft. hose; 6 service and 4 pumpers for replacement of old ones
(C) 2, or possibly 3, for replacements

Norfolk, Va.
(A) 3 750-gal. pumpers; 1 75-ft. aerial truck and 1 750-gal. pumper on order
(B) 3 additional fire stations fully manned and equipped; 1 light draft fire boat with 4 1,500-gal. pumps fully equipped; auxiliary equipment
(C) Doubtful, if any

Richmond, Va.
(A) None
(B) 2 aerial trucks; 2 hose wagons; 3 1,000 gal. pumpers for new territory annexed; 1 aerial truck and 2 engines for replacements; 3 or 4 trailer pumps
(C) All will possibly be supplied

Spokane, Wash.
(A) 1 750-gal. pumper; 5 passenger cars; 11,000 ft. fire hose; 13 carbon tetrachloride extinguishers; 8 gas masks; 1 5-gal. foam extinguisher
(B) 2 750-gal. pumpers; 1 jr. aerial truck; 1 1,000-gal. pumper; 6,000 ft. fire hose; 14 gas masks; 2 oxygen masks; 1,000 ft. 1¼-in. hose
(C) None

Tacoma, Wash.
(A) None
(B) 4 stations; 10 1,000-gal. pumpers; 2 100-ft. ladder trucks; 30 trailer pumps; 50,000 ft. 2½-in. hose; 10,000 ft. 1½-in. hose; 5,000 ft. ¾-in. chem. hose; 100 2½-in. nozzles; 50 1½-in. nozzles; 50 2½-in. fog nozzles; 20 2½-in. to 1½-in. siameses; 24 hydrant gates; 100 pump cans; 100 stirrup pumps; 20 15-lb. CO_2 fire extinguishers; 250 all-service masks; 500 all-service canisters; 10 ½-hr. oxygen helmets; 6 foam generators; 12 tons foam powder; 500 safety helmets; 60 axes; 24 life nets; 5 cutting torches; 5 150-ft. life lines; 6 floodlights with generators
(C) 6,000 ft. 2½-in. hose; 1,000 ft. 1½-in. hose; 1,000 ft. ¾-in.

25,000 to 100,000

Gadsen, Ala.
(A) 1 500-gal. pumper
(B) 2 city service trucks; 2 hose wagons; 2 aerial ladder trucks; 2 quad pump and ladder combinations; 6 1,000-gal. pumpers
(C) Not reported

Mobile, Ala.
(A) 100-ft. aerial truck; 750-gal. pumper; 500-gal. pumper
(B) 3 750-gal. pumpers; 1 65-ft. jr. aerial truck; 1 city service truck; 8,000 ft. 2½-in. hose; 2,000 ft. 1½-in. leader line hose; 2 oxygen breathing apparatus; 12 2½-in. shut-off nozzles; 12 1½-in. shut-off nozzles; 1 acetylene burning torch; 12 short wave receiving radio sets; 1,000 ft. booster hose; 30 additional men
(C) 4,000 ft. 2½-in. hose; 1,000 ft. 1½-in. hose; 6 2½-in. nozzles; 6 1½-in. nozzles

Tuscaloosa, Ala.
(A) 1 quint. comb. unit
(B) 2 750-gal. pumpers; 1 75-ft. aerial truck with 200 ft. ground ladders
(C) None at present

Tucson, Ariz.
(A) 1,000 ft. 2½-in. hose; 8 nozzles; 2½-hr. oxygen masks; 1 1,500-watt light unit
(B) 2 750-gal. pumpers; 2,000 ft. hose
(C) None

Bakersfield, Calif.
(A) 1 85-ft. aerial ladder truck; 2 1½-ton hose wagons; asbestos suits; shut-off nozzles; stretchers; other tools and appliances
(B) Several portable pumping units (trailer)
(C) Not reported

Beverly Hills, Calif.
(A) 1,000-gal. pumper
(B) 12 500-gal. triple comb. engines complete with hose, ladders, booster tanks
(C) Not reported.

Fresno, Calif.
(A) 1,000-gal. pumper under construction; 2,200 ft. hose
(B) 14,000 ft. 2½-in. double jacket hose; 3,200 ft. 1½-in. double jacket hose; 18 hose nozzles and tips; 1 100-ft. motor driven aerial truck; 4 1,000-gal. pumpers; 5 300-gal. tanks equipped with booster pumps and 500 ft. 1-in. hose; 17 portable trailer pumps with auxiliary pumps of 150-gal.
(C) Not reported.

Glendale, Calif.
(A) 1 1½-ton truck equipped as triple comb.; 1 ½-ton truck equipped with hose
(B) 1 aerial ladder truck; 1 1,000-gal. triple comb. pumper; 5,000 ft. 2½-in. hose; 8 500-gal. triple comb. pumpers
(C) Not reported.

Huntington Park, Cal.
(A) None
(B) 1 85-ft. aerial truck; 2 500-gal. tank wagons; 2 200-gal. tank wagons; 4 trailer units; small tools and equipment
(C) Not reported

Pasadena, Calif.
(A) 2 trailer units, 1 squad; 1 chief's car; 5000 ft. fire hose
(B) 2 triple comb; 1 aerial truck; 6 trailer units; 12,000 ft. fire hose; 5,000 ft. manila rope; 7 2-way

Magnesium Fire Extinguisher

Fireman Michael Farris of the Vega Aircraft Corporation, Burbank, Cal., demonstrates the efficiency of his newly invented solution for fighting magnesium fires such as are caused by incendiary bombs or by friction in lathes and milling machines. After twenty seconds the viscous liquids and carbon dioxide have the magnesium fire under control.

radio communication systems; 125 hydrants; small equipment
(C) Not reported

Riverside, Calif.
(A) 4 pick-up trucks, 1 having a 75-gal. pump and 100-gal. water tank, 3 having a 150-gal. pump and 150-gal. water tank. One unit also equipped with a 30-gal. high pressure pump. All units capable of carrying 500 ft. 1½-in. hose and other equipment. 6,000 ft. of hose
(B) 1 service aerial truck; 2 750-gal. pumpers; new fire alarm system; drill tower; small tools and appliances
(C) Drill tower; some small tools and appliances

San Jose, Calif.
(A) 2 750-gal. triple comb. pumpers held up for priority; service truck on order; 2 comb. water tank and hose wagons on order; 100 new hydrants
(B) 300 new hydrants; 1 service truck; 2 rescue or squad wagons; 2 monitors; 30 more men
(C) All questionable

Santa Ana, Calif.
(A) 1,000 ft. 1½-in. hose; 1,500 ft. 2½-in. hose; 5 double male couplings; 6 fire hydrant wrenches; 4 fog nozzles; 1 resuscitator; 1 panel box ¾-ton truck
(B) 1 triple comb. pumping engine; 1 65-ft. aerial ladder truck complete
(C) May purchase ladder truck and pumper; will purchase some small tools and gas masks

Santa Barbara, Calif.
(A) None
(B) Auxiliary pumpers and extra hose
(C) If bond issue carried, 2 750-gal. or 1,000-gal. pumpers, 1 aerial ladder and 1 comb. squad and booster wagon will be purchased

Santa Monica, Calif.
(A) 4,000 ft. double jacket 2½-in. hose
(B) 1 85-ft. aerial truck; 1 squad wagon; 2 750-gal. pumpers and 4,000 ft. hose; 12 auxiliary autos
(C) Not reported

Southgate, Calif.
(A) Rescue truck
(B) 1 1,250-gal. pumper; 1 1,000-gal. pumper; 4 auxiliary units.
(C) 1,000-gal. pumper may be purchased

Colorado Springs, Colo.
(A) 1 750-gal. triple comb. pumper
(B) 2 750-gal. pumpers; 1 city service truck; 2,000 ft. 2½-in. hose; 1,000 ft. 1½-in. hose
(C) None

Pueblo, Colo.
(A) None
(B) 4 comb. pumpers; 1 100-ft. aerial ladder
(C) No appropriation made

Bristol, Conn.
(A) Quint. pumping unit; 1,000 ft. 3-in. hose; 2,000 ft. 2½-in. hose; 1,000 ft. 1½-in. hose; 500 ft. booster hose; 4 cellar pipes; 14 salvage covers; small equipment on order; 2 1,000-gal. comb. pumpers on order
(B) Trailer pumps and hose for same
(C) Pump can extinguishers will probably be ordered

Meriden, Conn.
(A) 1,000-gal. pumper; 2,000 watt light generator
(B) City service truck; several trailer pumps; 2,000 ft. 2½-in. hose
(C) Hose

Middletown, Conn.
(A) Rubber coats, helmets, fog nozzles; 35-ft. wood insulated ladder; 1,600 ft. 2½-in. hose
(B) 2 500-gal. pumps; 1 ladder truck; 4,000 ft. 2½-in. hose
(C) Some hose

New Britain, Conn.
(A) 1 750-gal. pumper on order since June, 1941. 2,500 ft. hose purchased.
(B) 4 1,000-gal. pumpers; 2 85-ft. aerial trucks; 2 city service trucks; 8 portable pumps; 8,000 ft. 2½-in. hose; 5,000 ft. 1½-in. hose; 64 knapsack pumps; 8 fog nozzles; 12 35-ft. ladders; 12 16-ft. ladders; 16 playpipes & shut-offs for 2½-in. hose; 8 playpipes and shut-offs for 1½-in. hose; 24 axes and 16 adjustable hydrant wrenches
(C) Hose and equipment will probably be made available

New London, Conn.
(A) 1 750-gal. triple comb. pumper; 1 city service truck. These are replacements
(B) 4 750-gal. triple comb. pumpers; 18 trailer pumps; 2 ladder trucks; 2 fire boats; 15,000 ft. 2½-in. and 3-in. hose; deck guns; nozzles; fittings, etc.
(C) Not reported

Waterbury, Conn.
(A) 2 750-gal. pumpers as replacements; 2 new 750-gal. pumpers; 16 brass knapsack pumps; 2 small fog nozzles
(B) 5,000 ft. 2½-in. hose; 100 gas masks; 200 stirrup pumps; 50 trailer pumps
(C) 1 750-gal. pumper; 1 65-ft. aerial ladder; 2½-in. hose

Orlando, Fla.
(A) 1 1,000-gal. comb. pumper and hose wagon with booster tank
(B) 2 addl. pumpers and 1 65-ft. aerial truck
(C) 2 pumpers

St. Petersburg, Fla.
(A) None. (B) None

Rome, Ga.
(A) 2,000 ft. 2½-in. hose; 200 ft. booster hose; 1 nozzle; 1 stirrup pump
(B) 100 stirrup pumps; 5 1-in. fog nozzles
(C) 100 stirrup pumps; 5 1-in. fog nozzles

Savannah, Ga.
(A) 3 750-gal. triple comb. pumpers; 1 1,000-gal. triple comb. pumper; 2 hose wagons; 1 100-ft. aerial truck; 2 foam generators
(B) 20 portable pumpers with 600 ft. 1½-in. hose and shut-off nozzles. 500 stirrup pumps equipped with necessary hose and shut-off nozzles; 150 steel bullet-proof helmets
(C) Not reported

Boise, Ida.
(A) 800 ft. 2½-in. hose and 400 ft. 1½-in. hose
(B) 1 2-door fire station; 1 1,000-gal. pumper; 2,000 ft. of hose; 2 300-gal. trailer pumps
(C) Doubtful if any

Aurora, Ill.
(A) 1 1,000-gal. triple comb. pumper equipped with portable light system, inhalator and masks; 800 ft. 2½-in. hose
(B) 2 85-ft. aerial trucks; 4 750-gal. pumpers; 10 150-gal. trailer pumps; 1 quad service truck; 5 hose wagons; 5 city service trucks.
(C) None

Berwyn, Ill.
(A) None
(B) 1 750-gal. pumping engine, portable hand pumps, 2½-gal. extinguishers; addl. fire hose
(C) Doubtful if any will be purchased

East St. Louis, Ill.
(A) None
(B) None
(C) Not reported

Maywood, Ill.
(A) None
(B) 1 1,000-gal. pumper; 1 65-ft. aerial truck; 1,000 ft. 2½-in. hose; 1 squad truck
(C) Doubtful if any will be purchased

Rockford, Ill.
(A) None
(B) 2 1,000-gal. pumpers; 2 750 gal. pumpers; 6,000 ft. 2½-in. hose
(C) 1 1,000-gal. pumper; 3,000 ft. 2½-in. hose

Rock Island, Ill.
(A) None
(B) 2 750-gal. pumpers; minor equipment
(C) Not reported

Waukegan, Ill.
(A) 1,200 ft. of 2½-in. hose; 400 ft. 1½-in. hose; 2,000 ft. 1-in. hose
(B) 1 1,000-gal. pumper; 1 aerial truck; 4 auxiliary trailer pumpers
(C) 1 1,000-gal. pumper; 1 aerial truck; 4 auxiliary trailer pumpers

Anderson, Ind.
(A) None
(B) 1 750-gal. pumping engine
(C) 1 750-gal. pumping engine

Kokomo, Ind.
(A) 2 500-gal. pumpers; light plant; 2,000 ft. 2½-in. hose; cutting torch; 800 ft. 1½-in. hose; 500 ft. 1-in. hose; auxiliary generator for radio; small tools
(B) 30 Auxiliary pumpers; 10,000 ft. 2½-in. hose; 5,000 ft. 1½-in. hose; stirrup pumps; shovels
(C) Not reported

Marion, Ind.
(A) 1 750-gal. pumper; 2,000 ft. 2½-in. hose
(B) 1 city service truck
(C) Not reported

Michigan City, Ind.
(A) 1,000 ft. 2½-in. hose; 400 ft. 1½-in. hose
(B) 2 750-gal. pumpers as replacements; 2 add.
(C) Not reported

New Albany, Ind.
(A) 750-gal. pumper as a replacement
(B) Portable pumpers equipped with necessary hose; 15,000 feet 2½-in. hose
(C) Not reported

Richmond, Ind.
(A) None
(B) Fire hose
(C) Fire hose

Terre Haute, Ind.
(A) 750-gal. pumper; 1,000 feet 2½-in. hose; 400 feet 1½-in. hose
(C) 2 750-gal. pumpers as replacements; 100 stirrup pumps; 3,000 feet 2-in. hose; 1,000 ft. 1½-in. hose
(C) 750-gal. pumper on order; 1,000 ft. 2½-in. hose

Council Bluffs, Ia.
(A) Emergency unit donated to city
(B) Aerial ladder as replacement; 300-gal. pumper as replacement; 1,000-gal. pumper; 2,000 ft. 2½-in. hose; 500 ft. 1½-in. hose; fog nozzles for 2½-in. and 1½-in. hose; extra oxygen cylinders for masks; canisters for all-service masks
(C) Hose; fog nozzles; 1 truck

Cedar Rapids, Ia.
(A) 1 750-gal. pumper; 2½-in. hose; miscellaneous equip
(B) Lighting equip.; forcible entry tools; smaller equip.
(A) All depending upon priority

Clinton, Ia.
(A) None
(B) 1 750-gal. pumper with booster; 2 oxygen masks.
(C) Not reported

Dubuque, Ia.
(A) 1 750-gal. pumping engine
(B) Foam generating unit; aerial truck
(C) Not reported

Mason City, Ia.
(A) None
(B) 750-gal. pumper as a replacement; 8 addl. firemen
(C) None

Fire Pumps for the Army

In the foreground is part of a recent shipment of pumps made by the Waterous Company to the U. S. Army. In the background is a group of cargo pumps, with capacities up to 1250 gallons per minute, awaiting shipment. A large number of these pumps for fire apparatus have been furnished to the Navy and Marine Corps.

Sioux City, Ia.
(A) 2,000 ft. 2½-in. hose; 2 1-hr. oxygen breathing masks; 1 750-gal. pumper; 1,000 ft. cotton rubber lined hose (2½-in.); 1,000 ft. cotton rubber lined 1½-in. hose, on order
(B) 1,0000 ft. 1-in. hose; 2 2-way radio sets
(C) 2 2-way radio sets

Waterloo, Ia.
(A) 2 750-gal. pumpers; 3,000 ft. 2½-in. hose; 300 ft. 1½-in. hose; 1 cellar pipe; 7 fire alarm boxes; 2 1-hr. oxygen masks
(B) 2 pumping engines; 2,000 ft. 2½-in. hose; 500 ft. 1½-in. hose; fire alarm boxes and equipment
(C) Funds are provided for purchase of engine, but purchase probably will not be made under present conditions

Topeka, Kans.
(A) 1 2-way deluge set; 4 2½-in. fog nozzles; 1,600 ft. 2½-in. hose; 500 ft. 1½-in. hose; 10 2½-gal. pump-type extinguishers
(B) 900-gal. pumper; aerial ladder truck; 2,000 ft. 2½-in. hose
(C) 2,000 ft. 2½-in. hose

Covington, Ky.
(A) 1 750-gal. pumper; 1 truck for fire alarm system
(B) 1 750-gal. pumper; 1 flood light generator
(C) 1 750-gal. pumper; 1 flood light generator

Lexington, Ky.
(A) None
(B) 1 1,000-gal. pumper
(C) Asked in budget, but not voted upon as yet

Shreveport, La.
(A) None
(B) 30 trailer pumps; 1 85-ft. aerial ladder; 1 750-gal. triple comb. pumper
(C) Not reported

Bangor, Me.
(A) 1 city service ladder truck; 1,000 ft. 1½-in. hose; 1,000 ft. 2½-in. hose. Trailer pump on order
(B) Not reported
(C)1½-in. and 2½-in. hose

Lewiston, Me.
(A) 1 750-gal. triple comb. pumper; 5,000 ft. 2½-in. hose; booster hose; 1 trailer pump; 2,000 ft. 1½-in. hose; 12 all-service masks; 2 forestry units; 36 knapsack pumps; fog applicators
(B) 1 750-gal. pumper
(C) Not reported

Portland, Me.
(A) 12,000 ft. 2-in. hose; 5,000 ft. 3-in. hose; 3,000 ft. 1½-in. hose; 24 fog. nozzles; 1½-in. hose equipment; 2 trucks (1¼ and 1½ ton); 2½-in. shut-off pipes, gates, etc.; 2-way radio; 3 air whistles; fire alarm boxes
(B) Ten addl. trailer pumps; helmets and equip. for auxiliaries; 10,000 ft. hose.
(C) Equipment for auxiliaries

Cumberland, Md.
(A) None
(B) 8 500-gal. pumps with 1200-ft. hose body; 10 hose wagons with 2,000 ft. hose body; 2 85-ft. aerial trucks; 35,000 ft. hose and 75 shut-off nozzles
(C) Not reported

Hagerstown, Md.
(A) None
(B) 5 auxiliary portable pumps; 3,000 ft. 2½-in. hose; 2,000 ft. 1½-in. hose
(C) Possible half of this amount

Belmont, Mass.
(A) 3 trailer pumps; 2 trucks; 1 hose carrying unit; 1 portable pump; equipment for 120 men
(B) Not reported
(C) Not reported

Chicopee, Mass.
(A) 1 triple comb. 750-gal. pumper; 1 quad with 500-gal. pump; 1 resuscitator; 70 helmets; 1,500 ft. 2½-in. hose; 1 3-way deluge gun; 2 2½-in. nozzles
(B) 1 65-ft. aerial truck; 2 85-ft. aerial trucks; 1 1,000-gal. triple comb. pumper; 8,000 ft. 2½-in. hose; 4,000 ft. 1½-in. hose; 6 2½ by 1½-in. water thiefs; 4 3-way deluge guns; 40 gas masks; 7 booster fog nozzles; 12 Dugas extinguishers; 4 portable light plants; 2 2½-in. nozzles; 3 life nets; 1 deputy chief's car; 1 chief's car
(C) Not reported

Everett, Mass.
(A) None
(B) 15 600-gal. portable trailer pumpers
(C) None

Fitchburg, Mass.
(A) 1 750-gal. pumper; 1 1,800 watt light plant; nozzles, hose, axes, etc.
(B) 1 750-gal. pumper; 2 500-gal. trailer pumps; appliances such as hose, nozzles, etc.
(C) 1 750-gal. pumper; possibly the trailer pumps

Lynn, Mass.
(A) 9 trailer pumpers ordered but unable to get delivery; 6,000 ft. of 2½-in. hose; 1,000 ft. 1½-in. hose; 40 spray-type extinguishers
(B) 75-ft. quint. comb.
(C) 75-ft. quint. comb.

Malden, Mass.
(A) 500-gal. auxiliary pumper; 65-ft. jr. aerial ladder on order; 750-gal. pump ordered to be installed in a comb. hose wagon.
(B) 1 1,000-gal. pumper; 2 750-gal. pumpers; 1 65-ft. jr. aerial truck to replace a city service truck; 1,000 ft. 3-in. hose; 10,000 ft. 2½-in. hose; 5,000 ft. 1½-in. hose
(C) Not reported.

Medford, Mass.
(A) 1 auxiliary trailer pump
(B) 7 trailer pumps; 8 trucks; replacement of 2 750-gal. pumps; 2 aerial trucks; 6,000 ft. 2½-in. hose; 9,000 ft. of 1½-in. hose; auxiliary equipment
(C) Not reported.

Melrose, Mass.
(A) 5 trailers built and 8 more to be built; 1,000 ft. 1½-in. hose
(B) 3 500-gal. pumpers; 1 ladder truck; 10,000 ft. 2½-in. hose; equipment to outfit auxiliary fire department
(C) 3,000 ft. of hose

Revere, Mass.
(A) 1 750-gal, triple comb. pumper; 4,000 ft. hose; 4 fog applicators; 6 gas masks; 1 lighting plant; radio transmitter and receivers
(B) 1 750-gal. trip. comb. pumper; 4,000 ft. hose; fire alarm boxes; overhead fire alarm wires to be placed underground
(C) 1 750-gal. triple comb. pumper; 2,000 ft. hose; fire alarm system improvements

Taunton, Mass.
(A) 2 500-gal. pumpers; 1 85-ft. aerial ladder. 750-gal. pumper
(B) 1 750-gal. pumper; 5 500-gal. trailer pumpers; 5,000 ft. 2½-in. hose; 5,000 ft. 1½-in. hose; 2 acetylene cutting outfits
(C) Some of the hose and the 2 cutting outfits are expected to be purchased; 750-gal. pumper will be purchased if a priority rating can be obtained

Watertown, Mass.
(A) 750-gal. pumper ordered
(B) 1 750-gal. pumper; 1 65-ft. aerial truck; 6 500-gal. trailer pump with 500 ft. of hose ea.; 3,000 ft. 2½-in. hose; 4,000 ft. 1½-in. hose. 1,000 ft. 2½-in. hose, 5,000 ft. 1½-in. hose, nozzles, axes, gates, spanners, plaster hooks, 2 500-gal. trailer pumpers for auxiliary fire force
(C) Material for auxiliaries

Ann Arbor, Mich.
(A) 500 ft. 2½-in. hose and 25 each of rubber coats, boots and helmets for auxiliary fire force
(B) Pumper; 500-ft. fire hose
(C) Fire hose

Battle Creek, Mich.
(A) None
(B) 5 pumpers and 1 service aerial truck
(C) Not reported

Dearborn, Mich.
(A) None
(B) 1 1,250-gal. pumper; 5 500-gal. pumpers; 8 hose wagons; 8 1,200-gal. water tank trucks; 4 2-ton trucks for sand; 4 1-ton trucks for small equipment; 12 asbestos suits; 4 acetylene cutting outfits; 5 doz. prs. asbestos gloves; 2 doz. prs. colored goggles; 2 doz. fire axes; 3 deluge sets; 2 foam generators; 120 2½-gal. extinguishers, 6 tons foam powder; 5,000 ft. 3-in. hose; 10,000 ft. 2½-in. hose; 5,000 ft. 1½-in. hose; 100 gas masks; 120 oxygen masks; misc. tools
(C) 1 1,250-gal. pumper

Highland Park, Mich.
(A) 1 100-ft. aerial ladder truck; 2,000 ft. 2½-in. hose
(B) 4 500-gal. pumpers; 25 knapsack pumps
(C) 4 pumpers and knapsack pumps to be approved by City Council

Jackson, Mich.
(A) None
(B) Pumpers with large water tanks for booster lines; 1 service truck
(C) Service truck will be purchased if money is available in next budget

Kalamazoo, Mich.
(A) None
(B) At least 2 portable pumps; 1 portable light unit; 2 siphons; 3 doz. stirrup pumps
(C) Stirrup pumps

Lansing, Mich.
(A) 65-ft. aerial service truck; 2,500 ft. 1½-in. hose; reserve alarm power unit; docks built at edge of river for emergency pumping; replacement of nozzles
(B) None
(C) Not reported

Port Huron, Mich.
(A) 2,500 ft. 2½-in. hose; 2 male and 2 female couplings; 1½-in. hose expander; 4 all-service masks; 4 2½-in. nozzles; 4 1½-in. nozzles; 2 fog-type 1-in. booster nozzles
(B) 1 new piece of pumping equip.
(C) Pumper

Saginaw, Mich.
(A) 1,000-gal. pumper; 8,000 ft. 2½-in. hose
(B) 30 triple comb. trucks; 2 2,500-watt generators to supply fire alarm system and emergency lighting; 30,000 ft. 2½-in. hose; 10,000 ft. 1½-in. hose; 12 sirens; 600 gas masks.
(C) Not reported

Wyandotte, Mich.
(A) 1 1,000-gal. pumper; 1,200 ft. 2½-in. hose; 1,200 ft. 1½-in. hose; 3 evacuators
(B) 1 750-gal. pumper; 1 rescue car; 36 all-service gas masks; 1 acetylene steel cutting equipment; 1 chief's car
(C) Council authorized purchase of 750-gal. pumper; chief's car; 36 all-service gas masks; considering purchase of rescue car and acetylene equip.

Rochester, Minn.
(A) 1,000-gal. pumper; 1,500-watt light plant with 3 500-watt lamps; cutting torch
(B) 750-gal. pumper; hose wagon; serial truck
(C) Possibly the aerial truck

Jackson, Miss.
(A) 1 65-ft. jr. aerial
(B) 2 1,000-gal. pumpers; 4 750-gal. pumpers
(C) None

Joplin, Mo.
(A) 3,000 ft. of hose
(B) 1 500-gal. pumper with 250-gal. tank; 12 addl. firemen
(C) Doubtful if any will be purchased

Kansas City, Mo.
(A) 1 100-ft. aerial truck; 1 city service ladder truck; 4 750-gal. pumpers
(B) 6 750-gal. pumpers
(C) Not reported

St. Joseph, Mo.
(A) None
(B) 4,000 ft. hose and pump buckets or stirrup pumps for incendiary bombs
(C) Not reported

University City, Mo.
(A) 2,000 ft. double jacket hose
(B) 3 pumpers; 2 service trucks
(C) Not reported

Great Falls, Mont.
(A) 750-gal. pumper; 1,000-gal. pumper; 85-ft. aerial. All are to be delivered in the near future. Also 20 fire alarm boxes
(B) Not reported; (C) Not reported

Lincoln, Neb.
(A) 2 750-gal. triple comb. pumpers
(B) Aerial truck; first aid truck; 750-gal. pumper
(C) Probably an aerial truck

Belleville, N. J.
(A) 65-ft. aerial truck; 500-gal. pumper
(B) 500-gal. pumper
(C) 3,000 ft. 2½-in. hose; 1,000 ft. 1½-in. hose; inhalator. All of these have been ordered.

Hackensack, N. J.
(A) None
(B) 8 500-gal. trailer pumps; 10,000 ft. 1½-in. hose; 7,000 ft. 2½-in. hose; 10 tons foam powder
(C) Not reported

Hoboken, N. J.
(A) 10 500-gal. trailer pumps; 5,000 ft. 2½-in. hose
(B) None

Irvington, N. J.
(A) 1 75-ft. ladder truck; 3 pumpers and service truck rebuilt for reserve
(B) 1 75-ft. ladder truck; 2 1,000-gal. pumpers; 12 small pumpers; 8,000 ft. 2½-in. hose; 10,000 ft. 1½-in. hose; nozzles, helmets, axes, pike poles, rubber goods, etc.
(C) Small pumps; hose and appliances

Orange, N. J.
(A) None
(B) 1 85-ft. aerial truck; 1 750-gal. pumper
(C) 1 aerial truck

Plainfield, N. J.
(A) Not reported
(B) 24 stirrup pumps; pressure tanks equipped with 2 feet hose; 12 knapsack tanks; 8 mobile pumper units with hose and equip.; 150 service gas masks; 25 flashlights; 18 hydrant wrenches; 48 hose spanners; 16 pick-axes; 16 pike-poles; 8 crow-bars; 12-qt. buckets; 1,000 ft. ¾-in. rope; 8 tons dry sand; 48 long handle, square end shovels; 8 portable hand lights; 8 gas lanterns; 8 portable short-wave radios; communication system and alarm bells; first aid equipment; 480 ft. small hose for stirrup pumps; equip. for auxiliaries including rubber boots, rubber coats, mackinaws, crash helmets, insignia arm bands
(C) Not reported

Teaneck, N. J.
(A) None
(B) Coats, boots and helmets for 125 auxiliaries; 10 front-end 500-gal. fire pumps; 5,000 ft. hose (2½-in.); 5,000 ft. 1½-in. hose; nozzles, gates, etc., to fully equip 10 aux. fire stations; 1,000 ft. garden hose with spray nozzle and house faucet connec.
(C) all of equip. listed as soon as budget is passed.

Union City, N. J.
(A) 2½-in. hose
(B) Auxiliary pumpers; 1,000 ft. 1½-in. hose for each company
(C) 1,000 gal. pumper

West New York, N. J.
(A) None
(B) 1 100 ft. aerial truck; hose
(C) Trying to get both items

Amsterdam, N. Y.
(A) 8 elec. hand lights; spot and floor lens; 2,000 ft. 2½-in. double jacket hose; 1 750-gal. reconditioned pump

(B) 5 500-gal. trailer pumps; 90 stirrup pumps; 50 knapsack pumps; 300 gas masks; 1 life gun; 5,000 ft. 2½-in. cotton jacket rubber lined hose; 50 long handled shovels; 1 comb. booster and hose truck; 1 fire station and truck complete
(C) Not reported

Auburn, N. Y.
(A) 1,000 ft. 2½-in. hose; 200 ft. ¾-in. hose
(B) 1,000 gal. pumper; 1 65-ft. aerial truck
(C) 1,000-gal. pumper

Elmira, N. Y.
(A) 750-gal. triple comb. pumper to replace old machine; 1,000 ft. 2½-in. hose; 6 5-gal. knapsack pumps with adjustable spray nozzles
(B) Not reported. (C) Not reported

Jamestown, N. Y.
(A) 1 750-gal. triple comb. unit; cutting outfit.
(B) 4 trailer pumps; 10,000 ft. 2½-in. hose; 1 65-ft. jr. aerial
(C) 1,000 ft. 2½-in. hose

Mount Vernon, N. Y.
(A) 1 85-ft. aerial truck; 1,000-gal. pumper; 3,000 ft. 2½-in. hose; 1,000 ft. 1½-in. hose; 12 knapsack pumps; ladder pipe; multiversal nozzle; 2 deck pipes
(B) Replace 3 pumpers; replace 75-ft. aerial truck; 18 trailer pumps
(C) Not reported

Newburg, N. Y.
(A) None
(B) 4 triple comb. pumpers to replace apparatus now in service
(C) Doubtful if any will be purchased

Niagara Falls, N. Y.
(A) None
(B) 2 1,000-gal. pumpers; 1 85-ft. aerial ladder truck; 1 65-ft. aerial truck; 4 trailer pumps
(C) Probably 2 trailer pumps

Poughkeepsie, N. Y.
(A) 2,000 ft. 2½-in. hose
(B) 4 trailer pumps; 5,000 ft. hose
(C) Not reported

Troy, N. Y.
(A) None
(B) 3 1,000-gal. pumpers; 2 batt. chiefs' cars; 1 supply truck; 6 500-gal. portable pumps; 12 250-gal. portable pumps; 20,000 ft. 2½-in. hose; 2,500 ft. 1½-in. hose; 1,000 ft. 3-in. hose
(C) 3 1,000-gal. pumpers; 2 batt. chiefs' cars; 1 supply truck; 20,000 ft. 2½-in. hose; 2,500 ft. 1½-in. hose; 1,000 ft. 3-in. hose

Durham, N. C.
(A) 2 1-ton trucks equipped with booster tank and pump; portable lighting plant; ladders; pike poles; 800 ft. 2½-in. hose; extinguishers; nozzles; axes; ropes; tarpaulins; crowbars; lanterns; hydrant wrenches; spanners; reverse couplings and siren
(B) 750-gal. triple comb. pumper
(C) Contract has been let for 750-gal. triple comb. pumper

Greensboro, N. C.
(A) 2,000 ft. hose; gate valves; 1½-in. siamese gate valves; fog nozzles; inhalators; acetylene torch cutter; first aid kits; all-service gas mask; electric saws; electric battering ram; life nets; life gun; addl. rope; water keys; gas keys; small tools
(B) 2 quad. 750-gal. pumpers; 1 750-gal. pumper; 1 12-cylinder; 1 6-cylinder motor for replacement
(C) 1 750-gal. pump; 1 12-cylinder motor; 1 6-cylinder motor; 1 quad, if it can be bought

Wilmington, N. C.
(A) 3,000 ft. hose; foam truck; 4 all-service gas masks; fresh-air line mask
(B) 10 small booster pumpers; 50 stirrup pumps
(C) Possibly these items will be purchased

Winston-Salem, N. C.
(A) None
(B) Several pumpers and ladder trucks
(C) Not reported

Fargo, N. D.
(A) 1,000-ft. 2½-in. hose
(B) None (C) None

Cleveland Heights, Ohio
(A) Ladder truck
(B) None (C) None

East Cleveland, Ohio
(A) 750-gal. triple comb. pumper on order
(B) 9 trailer pumps; 7,000 ft. hose, nozzles, tools, etc.
(C) No money available at this time

Elyria, Ohio
(A) 1,300 ft 2½-in. hose
(B) 2 750-gal. pumpers; 2 500-gal. trailer pumpers; 4 auto trailers to carry hose, equip., tools; 10,000 ft. 2½-in. hose; 1,000 ft. 1½-in. hose; 800 ft. booster hose; nozzles, adapters, vapor nozzles, gas masks, hand pumps, salvage covers, rope, axes, other minor equipment and tools
(C) City is in no position to provide funds

Lakewood, Ohio
(A) 900 ft. hose; 1 triple comb. pumping engine
(B) 1 pumper; 1 aerial hook and ladder truck; 1,000 ft. of hose
(C) Aerial hook and ladder truck; hose

Mansfield, Ohio
(A) 900 ft. 2½-in. hose
(B) 3 750-gal. pumpers; 85-ft. aerial ladder truck; 1 service truck; 5,000 ft. 2½-in. hose
(C) 750-gal. pumper and 2½-in. hose

Marion, Ohio
(A) 8-circuit fire alarm switchboard; 30 fire alarm boxes; 750-gal. pumper; quad pumping unit; 2,000 ft. 2½-in. hose.
(B) 750-gal. pumper
(C) Not reported

Middletown, Ohio
(A) Emergency truck is being donated
(B) 1 station equipped with trip. comb. truck & accessories; addl. 1½-in. and 2½-in. hose; addl. men
(C) None

Portsmouth, Ohio
(A) None
(B) 4 pumpers as replacements; 3 500-gal. trailer pumps; 5,000 ft. of 2½-in., 1½-in. and 3-in. hose
(C) Not reported

Steubenville, Ohio
(A) Small equipment such as tools, extinguishers, etc.
(B) 2 pumpers; 2 emer. trucks; inhalators; 2,500 ft. hose; lighting equip.; heavy jacks; blocks; tools; extra waterproof clothing; helmets; ropes; cables
(C) Pumper; emer. truck; light equip.; inhalators

Warren, Ohio
(A) None
(B) 2 1,000-gal. pumpers; 1 750-gal. pumper; 1 quad truck; 1 emer. truck; 10,000 ft. 2½-in. hose; 3,000 ft. 1½-in. hose
(C) Levy to be voted. If passed equip. will be purchased

Enid, Okla.
(A) None
(B) Addl. equip.; addl. men
(C) Not reported

Muskogee, Okla.
(A) 2,500 ft. 2½-in. hose
(B) 3 pumpers; 1 85-ft. aerial; 1 salvage truck
(C) All to be purchased. Bond issue to be voted upon

Salem, Ore.
(A) None
(B) 1 700-gal. pumper and chem. truck; first aid car
(C) Both are in budget for 1942

Altoona, Pa.
(A) Public water system extended; 5 fire alarm boxes; 47 fire plugs; 500 ft. booster hose; 1,000 ft. 2½-in. hose; hose rack
(B) 1 500-gal. pumper; 750-gal. pumper; 1,000 ft. 2½-in. hose; 25 shut-off nozzles; 1 squad car; 12 addl. men; 2 85-ft. aerial ladder trucks; 1 life net; 2 portable light systems; 100 helmets; 1 asst. chief's car; 12 fire coats; 8 prs. boot; 2 new fire stations
(C) 2 pumpers; 12 nozzles; 1,000 ft. 2½-in. hose; 6 firemen's coats; 5 prs. boots

Easton, Pa.
(A) 750-gal. pumper as replacement
(B) 1 quad pumping engine; 2 pumpers; 2 aerial trucks
(C) Aerial truck

McKeesport, Pa.
(A) None
(B) 3 pumpers; fire boat; addl. gas masks; power plant; fire pumps
(C) It is believed that all will be purchased

Sharon, Pa.
(A) None
(B) 2 addl. fire stations; 4 500-gal. pumpers; 1 85-ft. aerial fully equipped; 5,000 ft. 2½-in. double jacket rubber lined hose; 2 portable deluge nozzles; life saving equip.; knapsack pumps; stirrup pumps; gas masks
(C) 500-gal. pumper

Washington, Pa.
(A) 2,000 ft. 2½-in. hose; 500 ft. 1½-in. hose
(B) 5,000 ft. 2½-in. hose; 2,000 ft. 1½-in.; 3 pumpers; 1 ladder truck; equip. for 200 auxiliary firemen
(C) None

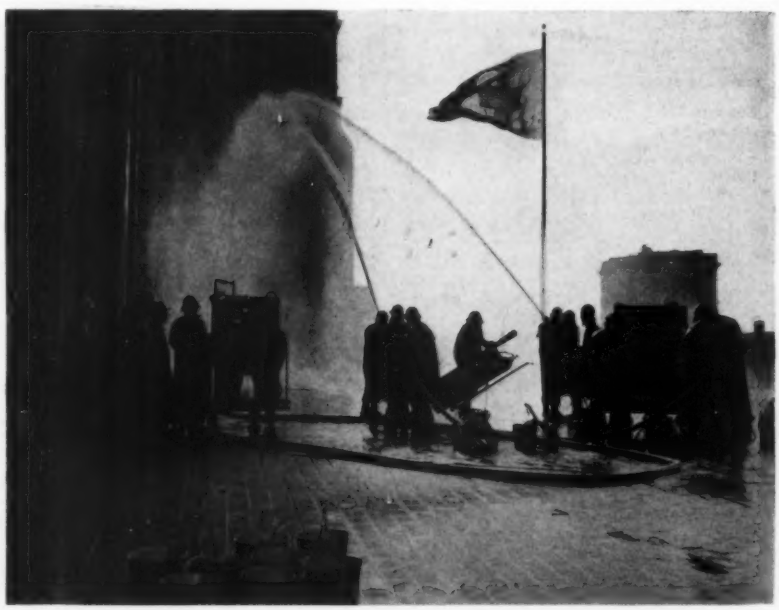
Wilkes-Barre, Pa.
(A) None
(B) 2 pumpers; 1 75-ft. aerial ladder truck; 1 floodlight or emer. wagon
(C) All will be purchased in 1942, pending the bond issue at the spring election

Wilkinsburg, Pa.
(A) 500 ft. 2½-in. hose
(B) More man power; 1,000 ft. 2½-in. hose
(C) 1,000 ft. 2½-in. hose

Woonsocket, R. I.
(A) None
(B) 1,000-gal. pumper to replace old pumper; 100-ft. aerial ladder; 4 trailer pumps
(C) Probably all

Columbia, S. C.
(A) 500-gal. trailer and fire pump complete; 600-gal. pumper on order
(B) 5 pumpers; 1,400 knapsack pumps, 5½-gal. capacity; 2,800 soda and acid extinguishers; 1,200 ft. 2½-in. hose
(C) Not reported

Greenville, S. C.
(A) 1 65-ft. aerial ladder truck; 1 750-gal. pumper
(B) Small equip.; flood light system; fire alarm system
(C) Fire alarm; flood light system



Skyscraper Air Raid Precautions

What would happen to New York's skyscrapers if Axis raiders began dropping bombs on the heart of Midtown Manhattan? Here's the answer at the thirty-four story New York Life Building at 51 Madison Avenue, which has a daily "population" of 15,000 workers and visitors. Chief weapon of the skyscraper against air raid damage is a specially trained fire fighting force composed of the building's special armed guards and 160 maintenance men, many of them former members of New York City's Fire Department. Special sirens, emergency pumps and fully equipped first aid stations have been provided to cope with any emergency. In this picture, a fire fighting detail has gone into action, in practice, on the building's fourteenth floor terrace. Using two specially designed pumpers, they are directing two streams of water against upper stories of the building.

Sioux Falls, S. D.
(A) None
(B) 1 1,000 or 1,250-gal. pumper; 1 750-gal. pumper; 1 service truck
(C) Bids to be opened for 1,250-gal. pumper; also on a 1,000-gal. pumper. One of these will be purchased

Amarillo, Tex.
(A) None
(B) 1,250-gal. pumper; 750-gal. pumper; gas masks; light booster truck of 250-gal. capacity; addl. personnel
(C) Not reported

El Paso, Tex.
(A) 750-gal. quad; 1,000-gal. pumper on order
(B) 10,000 ft. of 2½-in. hose; 1,500 ft. 1½-in. hose
(C) 5,000 ft. 2½-in. hose and possibly 1,500 ft. 1½-in. hose

Galveston, Tex.
(A) 750-gal. pumper; 1,000 ft. 3-in. line for fire boat; 1,200 2½-in. hose for fire boat; 1,000 ft. 2½-in. hose for dept.
(B) 85-ft. aerial truck; service truck
(C) Service truck

Laredo, Tex.
(A) Fire hose to replace worn out hose; leader line hose for booster tank trucks; knapsack pumps; foam and soda & acid extinguishers
(B) Pump tanks with dual service nozzle tips
(C) Pump tanks with dual service nozzle tips

Lubbock, Tex.
(A) None
(B) 1 aerial truck; 2 750-gal. pumpers
(C) None

Port Arthur, Tex.
(A) None
(B) 12,500-gal. trailer pumpers; 12,000 ft. 2½-in. hose
(C) Not reported

Tyler, Tex.
(A) None
(B) 65-ft. aerial truck; 5,000 ft. 2½-in. hose; 2 750-gal. pumpers; 2 500-gal. pumpers; 1,000 ft. 1½-in. hose
(C) None

Waco, Tex.
(A) 2 750-gal. pumpers; 1 65-ft. aerial ladder truck
(B) Portable light plant; addl. men
(C) None

Burlington, Vt.
(A) 1 500-gal. pump; 1 600-gal. trailer pump
(B) 2 500-gal. pumpers; 1 hose truck; 1 ladder truck
(C) None

Danville, Va.
(A) Hose; resuscitator; gas masks
(B) 6 trailer pumps; 3,000 ft. 2½-in. hose; 1 750-gal. pumper
(C) 1,000 ft. 2½-in. hose

Lynchburg, Va.
(A) 85-ft. aerial ladder truck as a replacement; 2-hr. gas mask; 2,000 ft. 2½-in. hose; 1,500 ft. 1½-in. hose; 2 1½-in. fog nozzles; 4 2½-in. fog nozzles; 2 1½-in. spray nozzles; 2 1½-in. shut-off nozzles; pick-up truck for mechanic
(B) 10 addl. pumpers; 2 addl. aerials; hose
(C) Not reported

Portsmouth, Va.:
(A) None
(B) 4 1,000-gal. pumpers; 1 85-ft. aerial truck; 25 knapsack pumps; 100 gas masks; 2 portable floodlight units; 10,000 ft. 2½-in. hose; 1,800 ft. 1½-in. hose; 2 rescue trucks fully equipped with tools; 3 auxiliary fire pumpers; 3 inhalators
(C) 2 1,000-gal pumpers; 1 85-ft. aerial ladder truck; 3,500 ft. 2½-in. hose

Roanoke, Va.:
(A) None
(B) 5 pumpers; 2 city service trucks; hose
(C) None

Bellingham, Wash.
(A) None
(B) Not reported
(C) Not reported

Everett, Wash.
(A) 2 1,000-gal. pumpers; 5,000 ft. hose
(B) Block units and small pumping units
(C) Not reported.

Yakima, Wash.
(A) 1 100-ft. aerial ladder truck on order; 1½-ton commercial truck equipped with 2,500 ft. capacity hose body; 4,500 ft. 2½-in. hose and 6 nozzles
(B) 1 service truck; 8 comb. hose and pumpers; 2 2,000-gal. tankers equipped with 300-gal. pumps; 20,000 ft. 2½-in. hose; 3,000 ft. 1½-in. hose; 30 2½-in. nozzles; 20 1½-in. nozzles; 10 vapor nozzles
(C) None

Charleston, W. Va.
(A) None
(B) 1 aerial service truck; 5 750-gal. pumpers; 10,000 ft. hose; 30 addl. men.
(C) 1 750-gal. pumper; possibly aerial truck

Huntington, W. Va.
(A) 1,250-gal. pumper; 2,800 ft. hose; hydrant wrenches
(B) Addl. hose; several portable pumps
(C) Not reported

Wheeling, W. Va.
(A) 1,500 ft. 2½-in. hose
(B) 1 100-ft. aerial ladder; 2 750-gal. pumpers
(C) Aerial ladder truck is being considered. Possibility of its being purchased

Eau Claire, Wis.
(A) 750-gal. pumper as replacement
(B) 75-ft. aerial truck
(C) Not reported

Fond du Lac, Wis.
(A) None
(B) 2 750-gal. pumpers; power raised aerial ladder truck; truck to be used as hose tender
(C) None

Green Bay, Wis.
(A)65-ft. aerial ladder truck; 3,000 ft. 2½-in. hose; 1,500 ft. 1½-in. hose; oxygen masks; asbestos suits; tires for all apparatus; parts for apparatus
(B) Not reported
(C) No anticipated purchases this year other than hose and small equip.

LaCrosse, Wis.
(A) 1 quad; 1 service truck on order; 1,500 ft. of hose
(B) 1 750-gal. pumper
(C) 1 750-gal. pumper

Madison, Wis.
(A) 1 quad; addl. hose; addl. foam powder; life net; minor miscellaneous equip.
(B) Portable pumping units; another fire station equipped with 1 engine and 1 service station or 1 quad; hose and minor equip.
(C) None but minor tools

Racine, Wis.
(A) None
(B) 2 pieces of fire apparatus
(C) 1 quad truck

Superior, Wis.
(A) None
(B) 1,000-gal. pumper; 1 750-gal. pumper; 2 fire tugs; 6 pumping trailer units; 1 city service truck
(C) None

Wausau, Wis.
(A) 1,000 ft. 2½-in. hose; 200 ft. 1½-in. hose; 2 1-hr. oxygen breathing masks; 2 15-lb. carbon dioxide extinguishers
(B) 1 750-gal. pumper as a replacement
(C) Not reported

Wauwatosa, Wis.
(A) None
(B) 1 pumper; 1 jr. aerial truck; six or seven auxiliary pumping units (trailers); 3,000 ft. 2½-in. hose
(C) 1 1,00-gal. pumper; 2,000 ft. 2½-in. hose

Baltimore Trains Auxiliaries

The Baltimore (Md.) Fire Department prefers the self-propelled pumping unit for the Auxiliary Fire Brigade.

One auxiliary pumper has been purchased and others will be obtained under a plan now being considered. A separate 90-hp motor on the rear drives a 500-gpm pump. The pump has delivered 700 gpm from a pressure source. Equipment on the auxiliary pumper includes 900 feet of hose, two ladders, and other small tools commonly found on pumpers. The complete unit weighs 4,035 pounds.

Baltimore Auxiliary Fire Brigade members will be assigned to fire houses as fast as their training is completed. They will remain at the houses during their leisure hours, and while there will respond on the apparatus on alarms of fire. The Fire Board made the ruling that the civilian auxiliaries be permitted to ride the apparatus with the firemen, as a means of giving them practical experience and to hold the auxiliaries' interest in the brigade.

To qualify for the Auxiliary Fire Brigade, a civilian must first undergo a physical examination by a department surgeon. He then attends a twelve week course at the fire department drill school. The sessions at the drill tower are arranged in two hour periods, once a week for each class. When the civilian completes the twenty-four hours training he has had some of every evolution that the regular firemen must perform.

Great interest is displayed by the citizens attending the drill tower. A second drill tower is nearing completion in another part of the city, so that the increased number of applicants can be accommodated.

OTIS SMITH

Three Dies in Blast

Three men were killed and six others were injured seriously in an explosion in the Pratt and Whitney Division of the United Aircraft Corporation at East Hartford, Conn., where airplane engines are made for the United States Army. The explosion was classed as an "industrial accident" by the company.

Four welders employed by the Automatic Refrigerating Company were at work installing a dust collector unit on a machine used to spray molten aluminum on engine cylinders in the cylinder department of the plant when the blast occurred, possibly caused by the explosion of a tank of oxygen.

The Assembly Department and two other departments were put out of commission for several hours because of shorted power circuits, but the damage done was apparently not extensive. The fire that followed the explosion was quickly extinguished by the company's fire department aided by an automatic sprinkler system.

The defense disaster plan prepared for this community was put into effect immediately after the explosion.

Baltimore Auxiliary Pumper

Feminine Fire Fighters

By LORENA ANN OLMSTED

WOMEN have tried their hands at all professions, but it remained for the women of Citrus Heights, California, to organize a full fledged fire fighting unit. Started in an effort to relieve their husbands, it has become a full time job, without pay, often without even thanks.

The Citrus Heights District is outside of the city limits of Sacramento, but fire is no respecter of city limits, and it became necessary to establish a volunteer fire department. The trouble was that practically all the men worked in town and during the daytime there was no protection. Here is where the women came into the picture.

Any day in the year, the siren may send forth its call. When that happens, the women drop whatever they are doing, whether it is the weekly washing, baking a pie for dinner, or cleaning the house.

There are seven active members, Estaline Mulch, chief, Palmyra Ravinale, assistant chief. Elza Sulliavn, Evelyn Earls, Connie Erbs, Della Desimone and Elizabeth Stoddard. For two years they have carried on this difficult and often hazardous work, and during that time they have been instrumental in saving many hundreds of dollars worth of property that would otherwise have been destroyed.

The first year they were organized, there was an average of seven fires a week, but along with their fire fighting, the women wage a constant battle against carelessness. They have succeeded in persuading residents to put in hydrants where they are easily available in case of a fire, and have talked everyone into obtaining permits before burning the grass around their homes. Little things, but a step in the right direction.

When the siren sounds its warning, the women leave their homes and hurry to the station. They all know exactly what is expected of them as they have weekly fire drills under Chief Gene Desimone, whose wife is a member of the women's crew.

Quickly the fire truck is driven out and the women are on their way to the fire. They hope it is only a grass fire and that they will soon be able to return home, but it may be something more serious; a fire that will endanger both life and property.

One such fire they will always remember. A woman, whose husband worked in Sacramento, was bed-ridden and completely helpless. Her nurse went to mail a letter and while she was gone the house caught fire.

A passing motorist heard the invalid's screams, and rushed to her aid, then called the fire department. By that time the house was beyond saving, but there were a number of valuable barns and other out-buildings, and the women went to work. So intense was the heat that one entire side of the fire engine was blistered, but the women held to their posts until the fire was out. They didn't lose one of the out-buildings, though they suffered numerous burns, and the loss of eyelashes due to the heat.

There is an interesting history behind this small fire-fighting unit. So far as is known, it is the only one of its kind in the United States.

Raised Own Funds

When the idea first arose of having a volunteer fire department in Citrus Heights, the women joined with their husbands in giving card parties, dances, etc., to raise money to pay for the equipment. By the time it was ready to begin operations, it was free of debt.

The Citrus Heights fire district is 10 miles square and the women never know whether they will find an available hydrant or whether they will be forced to do the best they can without one. Because of this, they run a tanker with 750 gallons of water ,just in case they need it. The smaller trucks carry approximately 150 and 250 gallons each.

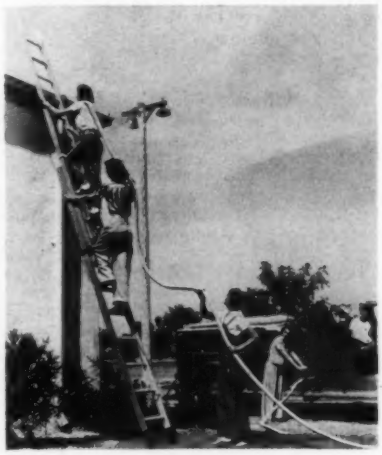
While the County takes care of the general upkeep of the department, all the extras, such as uniforms, etc., must be paid for by members of the crew, so they not only have to fight fires, but they must also give dances and parties to raise money for these needs.

But the women do not complain. It is all a part of their daily life and they accept it as such. There are funny things that happen, as well as tragic. One of these is the general attitude of the men who are sometimes attracted by the fire and come to help. They are willing to do everything they can to assist, but they seem to resent taking orders from the

These Women Need No Help in Connecting Up

women. But that feeling dates back to the garden of Eden so the women just laugh and let it go.

Sometimes danger comes so close that it is no joke. Mrs. Zella Desimone relates one incident when they were fighting a rather large grass fire. "We were moving steadily ahead," she says, "spraying the flames with



Ladder Drills Are Included in the Training of the Citrus Heights Fire Department

the special two-nozzle spray on the front bumper of the fire engine. One of the women was using a hose in back to put out any remnants of flame which the nozzle missed.

"We were completely absorbed in our work and failed to notice that the wind had veered. Suddenly we realized that the flames had encircled us. We were hemmed inside a wall of fire and had to do some mighty fast work to put out the flames before they reached the fire engine . . . and incidentally ourselves."

Most of the fires occur during the summer when the grass is dry and the houses thoroughly sun-cured. That is when the fire hazard mounts and any hour of the day may hear the wail of the siren.

The women have no time to change into a uniform. Even five minutes delay might mean the loss of a life or valuable property. Sometimes good silk stockings, or a new dress is sacrificed, but it can't be helped.

In town, the fire department knows that they won't have anything worse to drive over than a stretch of broken cement, but in the suburban areas it is something altogether different. Once the women were forced to drive across a rickety wooden bridge which collapsed behind them. They cut across ploughed fields where the heavy truck had better than an even chance of getting stuck, and through orchards where it takes expert driving to avoid a collision.

Though these women do a man's job and do it well, the eternal feminine crops up every now and then. One fire, which started around eight o'clock in the morning, was in an attic. The woman of the house was in town, probably taking her husband to work, so the fire ladies got busy.

They didn't want to damage the house any more than necessary so they used the fog nozzle instead of the heavier stream nozzle. Then when the fire was extinguished, they took mops, brooms and rags and cleaned up the whole house. It sounds funny, but it undoubtedly won the heart-felt gratitude of the absent housewife.

No Timidity Here

One extremely dangerous blaze was on a farm where they were told there was a large gasoline drum in the barn. It was up to them to keep the flames from reaching the barn unless they wanted a serious explosion.

No one could have blamed them if they had refused to stay under those conditions, especially as there wasn't a hydrant for them to use. But not one of the women balked. There was livestock to save, and outbuildings which meant a lot to the owner. So they stuck to their posts and prevented the flames from reaching the gasoline. The anti-climax came when they returned to the truck to find they had a flat tire.

Another interesting phase of their work, is the organization of the junior fire department. This is composed of the young sons of the fire women and their friends. During the summer months when there is no school, these youngsters perform an invaluable service. It is their self-imposed task to refill the tanks after each fire, so they will be ready for the next one. Also they keep a sharp watch for fires and send in an alarm, often before the owner himself knows about it.

Someday when they have grown to manhood and have families of their own, their wives may take over the strenuous job which their mothers are handling so efficiently today.

Old Tombs Prison to Be a Fire College

The New York City Fire Department is preparing to convert the old Tombs prison, at Centre and Leonard Streets, into a fire college to replace the present fire college and training school at 32-02 Queens Boulevard, Long Island City, Queens. The massive forty-four-year-old prison was abandoned last November when the prisoners were moved to the new Criminal Court Building and jail across the street.

Fire Commissioner Patrick Walsh stated that the Tombs could be converted into an ideal fire college because of the stout walls and the tiers of cell blocks, which are perfect for practice in climbing with scaling ladders. He said that hook-and-ladder units and other apparatus could be wheeled into the old prison yard and backed against the walls of the building to let firemen with hose lines stretch up extension ladders to the higher stories.

All recruits are sent to the fire college for three months of intensive work before being assigned to a company, and every two years each fire company in the city is called in for a short period of training.

Commissioner Walsh stated that so far as he knew the Tombs would become a permanent fire college, at least until the city could afford to construct a new building.

Grass and Brush Fires Quickly Succumb to the Skillful Efforts of the Citrus Heights Fire Fighters

O.C.D. MAKES ALLOCATION OF FIRE FIGHTING APPARATUS

War Department Has Determined Which Cities Will Receive It

ALLOCATION of fire-fighting equipment, gas masks, stretchers, cots, etc., under the recent $100,000,000 Congressional appropriations will be made principally to certain cities within 300 mile coastal strips regarded as "target areas" according to memorandum of plans released by James M. Landis, Director of the Office of Civilian Defense. Selection of communities will be based largely on priorities established by the War and Navy Departments.

Priorities among communities will be based upon three basic considerations: (1) likelihood of attack, (2) vulnerability, and (3) importance to war production of manufacturing plants in the community.

The system of allocating and distributing the material was worked out by Major General Lorenzo D. Gasser, War Department representative on the Board for Civilian Protection, Director of the Civilian Protection Division of the Office of Civilian Defense.

Mr. Landis and General Gasser pointed out that the application of these standards will mean that the relative sizes of the communities may sometimes have little bearing on the amount of equipment to be allocated. Where two communities are of equal size and vulnerability, the community having the more vital war production will receive the larger amount of equipment.

Mr. Landis urged communities not to send requests or requisitions for supplies to OCD headquarters in Washington.

"Allocations of protective supplies must and will be made according to plans arrived at in cooperation with the military experts of the War Department. Under the law we cannot make allocations on any other basis and we will be unable to give consideration to the requests of individual localities at variance with such a plan," Mr. Landis stated.

Under the appropriation, facilities, supplies, and services for the adequate protection of person and property from bombing attacks, sabotage or other war hazards are to be provided in localities determined to be in danger of attack and which are unable to provide suitable facilities.

The memorandum on the plans follows:

Initial Determination of Localities to Receive Equipment

The localities within the United States principally in need of protection from bombing attacks have been determined, after appropriate conferences with the military authorities to be the coastal area within three hundred miles of our sea or gulf coasts and in addition localities outside the coastal area wherein there are located important industrial installations producing critical war materials. The order of priority of issue to be based upon a logical consideration of the likelihood of attack, their vulnerability to attack and their importance to the national defense.

Protection of Localities Wherein Important War Production Plants Are Located

The Allied war effort being dependent, in large part, upon the production capacity of this country, it is logical that the effort of civilian defense should be directed primarily toward the protection of those localities wherein important manufacturing plants with war contracts are established.

This could not be done in the preparation of the initial estimates for the reason that the list of such localities was not obtainable. Lists of those towns are now available, resulting in a considerable increase in the number of towns to be protected as compared with the initial tentative allocation. Priority in the issue of protective equipment must be based upon the conditions previously set forth, i.e., likelihood of attack, vulnerability, and importance to the national defense.

Many towns of 10,000 population and over, located within the 300-mile coastal strip, now included in the original tentative allocations are not listed in the War and Navy Department lists as having manufacturing plants producing important war materials. Such towns, particularly those located more than one hundred miles from the coast, may be left out of the allocation lists in favor of smaller towns where important war production manufacturing plants are located.

Fire Fighting Equipment the Basic Element of Protection

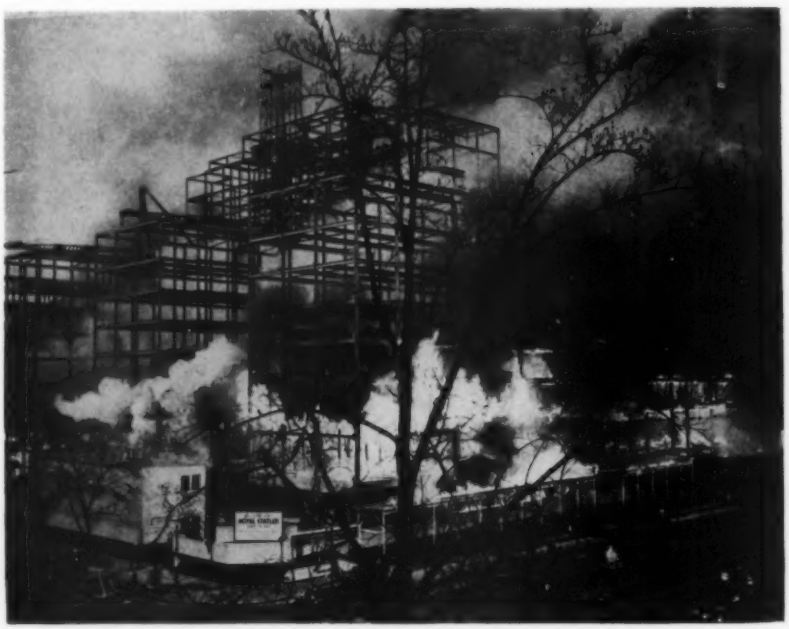
In view of the fact that great damage suffered in bombing attacks may result from the use of the fire bomb, auxiliary fire fighting equipment was considered as a basic element of the civilian defense equipment that should be furnished by the government.

Fire Defense Committee

Accordingly, a Fire Defense Committee was organized in the Office of Civilian Defense, consisting of one representative of each of the following organizations: National Board of Fire Underwriters; National Fire Protection Association; International Association of Fire Fighters; Bureau of Agricultural Chemistry and Engineering; National Bureau of Industrial Protection; Office, Chief of Engineers, War Department; Bureau of Yards and Docks, Navy Department; International Association of Fire Chiefs; Fire Equipment Section, War Production Board.

Formula Used in Determining Amount of Fire Fighting Equipment

This committee in addition to recommending specifications for the type of equipment to be purchased, also recommended the formula to be used in determining the ratio as between existing regular equipment and the auxiliary equipment. To determine the number of auxiliary pumpers needed, existing equipment was carefully and completely surveyed, particular attention being di-



Hotel Under Construction at Washington Visited by Fire

On February 8, the new Statler Hotel building at Washington, D. C., had, as an unvited guest, a fire which destroyed scaffolding and other falsework. The lower five floors of the eleven-story structure were involved. The federal government had acquired the building for office space after it was started as a Statler Hotel.

rected to the number of units over fifteen years of age. Equipment was then allocated on the following basis: in cities under 200,000 one auxiliary pumper for each pumper in operation plus one pumper for each existing pumper over fifteen years of age; in cities over 200,000, because of high value areas, two pumpers for each pumper in operation, plus one pumper for each pumper over fifteen years of age.

Types Permitted by War Production Board

On or about February 14, the War Production Board ruled that, owing to war requirements, self-propelled or trailer types of auxiliary fire fighting equipment could not be furnished, and that the types of equipment that would be furnished must be confined to the front mounted pump and the side mounted unit described below. All fire fighting accessories, such as hose, nozzles, axes, ladders, etc., are to be furnished with these pumpers.

Types of Pumpers to Be Furnished

(a) The front mounted pump unit consists of a single stage direct-connected centrifugal pump designed for mounting on the front of a truck ahead of the motor. This pump will be equipped with 1,500 feet of discharge hose and certain standard items of equipment. It will be necessary for municipalities receiving this type of unit to supply an open body truck with a motor developing at least 75 brake horse power at a minimum of 3,000 revolutions per minute.

(b) The so-called self-contained unit consists of a gasoline motor and a 500 gallon per minute centrifugal fire pump on skids and weighs approximately 1,400 pounds. This unit will be supplied with 1,500 feet of discharge hose together with the necessary equipment. It is intended that these self-contained units and the accompanying equipment shall be mounted on hose wagons or on the body of a truck of at least one and one-half ton capacity to be furnished by the municipality.

Gas Masks

With reference to gas masks for the civilian population, our initial problem has to do with the creation of facilities for quantity manufacture. This will be accomplished with a portion of the $100,000,000 through educational orders.

Equipment for Medical Teams and Casualty Stations

This equipment will be tentatively allotted on the following basis:

(a) One Team for each 5,000 population

(b) One Casualty Station for each 2 Medical Teams

Stretchers on the basis of 4 for each 5,000 population

Cots on the basis of 12 for each 5,000 population

First Aid belts on the basis of 9 per 5,000 population

Identification tags for medical kits on the basis of one book of 20 tags for each 1,000 population.

Equipment for Enrolled Workers

Arm bands on the basis of 60 per 1,000 population

Gas-proof capes on the basis of 30 per 1,000 population

Steel helmets on the basis of 20 per 1,000 population. The same helmets to be used for firemen.

Firemen's turn-out coats, and pants (pairs) on the basis of 4 per 1,000 population. It does not appear that firemen's boots will be available because of the rubber shortage.

Gas protection clothing on the basis of 4 sets per 1,000 population.

All of this equipment is based upon issue to individuals and teams actually enrolled in defense units of the Citizens' Defense Corps.

Conferences Between Regional Directors and State and Local Defense Agencies

Details with reference to allocation of this equipment are now being considered by our Regional Directors in conference with State officials. Such conferences will likewise consider questions of issue, administration, and care of equipment and supplies loaned to communities under the Act. It is likely that a number of communities will also be represented at these conferences.

Final Allocations

The recommendations of Regional Directors and State Defense Councils will constitute important factors in final allocation of equipment and supplies by the Office of Civilian Defense in Washington. First consideration will be given to those localities wherein important manufacturing plants with war contracts are located, and as recommended by the War and Navy Departments.

Requests for Equipment Not Required

Requisitions from communities for equipment and supplies for civilian defense purposes will not be necessary.

Certificates Required

After determination has been made as to the localities that will receive equipment and supplies, certificates will be prepared in this office showing the approximate amount of equipment to be issued, which will be sent to the mayor of each town scheduled to receive such equipment. This form includes a certificate to the effect that the town is unable to provide the equipment; that if received, the town will provide suitable facilities at the expense of the community for appropriate use of, care, maintenance, housing, distribution and security of said equipment; that the town agrees to organize and train volunteer units in the handling of same, with the specific understanding that title to such equipment remain in the possession of the United States.

Procurement

All of the equipment and supplies will be procured by appropriate agencies of the War Department.

Captain J. J. Sheedy Dead

Captain John J. Sheedy of the Albany, N. Y., Fire Protectives died recently at his home in that city.

The veteran firefighter, who rose from a volunteer to captain of the Protectives, had been ill for five months. Stricken last fall, he was treated at Albany Hospital for several weeks. On several occasions he returned to the Protectives to work but was persuaded by his men to return to his home and rest.

On December 16, 1903, he became a "buff," a volunteer member who worked hard at fires but received no pay for his efforts. Soon after, he was made a regular member of the patrol and in 1911 was promoted to lieutenant. Six years later he was promoted to captain.

During his thirty-eight year career as a fireman "Cap" Sheedy played a prominent role in fighting virtually every fire in Albany.

Decorated for Heroism

He was decorated twice for rescue work, once for saving a woman from a burning Green Street building, for which he received a medal from the Albany Field Club. He also received a medal for saving two infants from a blazing structure.

A leading exponent of fire prevention work through public education, Captain Sheedy annually lectured before scores of schools, clubs and institutions throughout the city and state.

Expansion Program for Fairfield Fire Department

A $150,000 expansion program for the Fairfield, Conn., Fire Department has been prepared by the Fire Commissioners and has been endorsed by the Fire sub-committee of the Defense Council. The Fire committee has named five of its members to take the necessary steps to obtain a Federal grant toward the program in view of the 410 new houses in defense villages, new defense plants and additions to other factories for defense production as well as the many other buildings erected in the town of Fairfield as part of the defense program.

A new fire station at Fairfield Center heads the various recommendations. The estimated cost is $90,000, of which $25,000 is for the site and $65,000 for the building. The Commissioners point out that the present building on Reef Road is not large enough to house a ladder truck, nor is there land enough to enlarge the present building.

The new station, they state, should have a floor space of at least 45 feet by 60 feet in the apparatus room. It calls for a fire alarm room, hose drying tower, hose storage room, repair shop, recreation hall, dormitory and supply storage space.

Other Improvements Planned

An addition to the Greenfield Hill fire station to cost $12,000 is the second recommendation. The third item includes apparatus. Two city service trucks or junior aerials to be housed at the Center and Tunxis Hill stations and to cost $10,000 each are recommended. Repair of the pumper at Fairfield Center station at a cost of $500 after which it would be transferred to service at Greenfield Hill, is part of the plan.

Moving of the fire alarm equipment to the Center fire station and improvement of the system is included at a cost of $1,000, and $4,000 is asked for new fire alarm equipment. Additional hose and gas masks are included in the proposal. Members of the Committee that is furthering the program as a defense measure are Edward Von Holz, Charles J. McClinch, Fire Chief Thomas Carroll, John T. Curtis and Goodwin Stoddard.

THOMAS F. MAGNER

DRIVE AGAINST FALSE ALARMS PROVES EFFECTIVE IN NEW YORK

Review of Results Offers Encouragement in Fight Against this Nuisance

By STEPHEN S. JACKSON

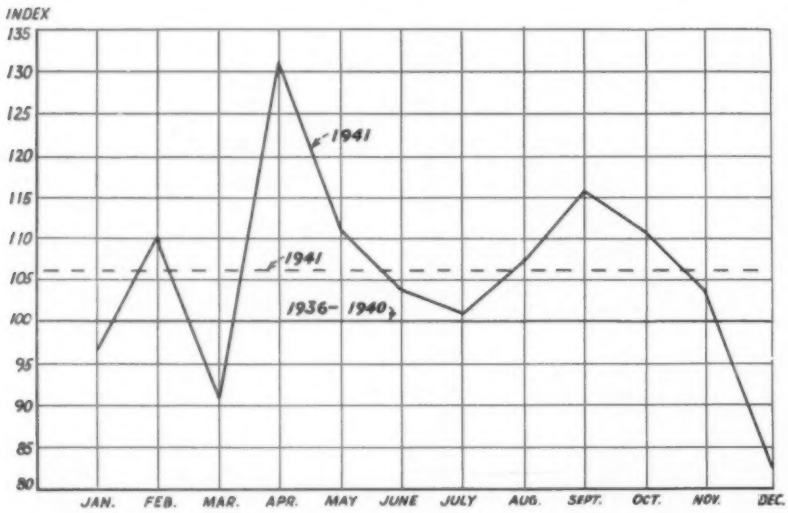
Justice, Director of the Bureau for the Prevention of Juvenile Delinquency, New York City

IN November an article appeared in "FIRE ENGINEERING" entitled "New York's False Alarm Campaign was Disappointing." Its author has long been a staunch foe of the false alarmist and the article was undoubtedly written in good faith. It is, however, misleading.

The campaign for the prevention of false fire alarms as conducted by the Bureau for the Prevention of Juvenile Delinquency from September 21st to October 30th, 1941, was a distinct and and outstanding success according to available figures. The main trouble with the November article was that it was premature.

The effects of an educational program of this type cannot possibly be appraised before it is over or even for some time after it has been concluded. An appeal was made to every principal in the public and parochial schools of the city setting forth a plan to be presented to the children. The libraries and museums in the City of New York cooperated. False alarms, however, are by no means exclusively the work of children, and the program as carried out embraced all ages.

Eighteen thousand posters were distributed in the subways. Seven radio broadcasts were conducted, dramatic sketches and interviews. Our guests on these programs twice included Mayor LaGuardia, Commissioner Walsh, Battalion Chief Wedemeyer, whose experiences in the London Fire Brigade under blitzkrieg attacks were dramatized; Mr. J. Stewart Baker, president of the Boy Scouts, as well as professional actors and actresses. A large exhibit was conducted at the Civilian and National Defense Exposition; over 5,000 pledges were signed by adults and children. A 400-foot square enlargement of the original drawing of Howard Chandler Christy was flashed with other plates continuously during the five days of "No False Alarm Week" on a huge screen in Grand Central Station, during which time an exhibit was on display across the street in the window of the City Information Center. The culmination of the campaign came in the last days of October when the firemen affixed on most of the fire boxes throughout the city eighteen thousand decalcomania reproductions of Mr. Christy's drawing. Obviously the effect of such a campaign could not be measured as the November issue undertook to do.

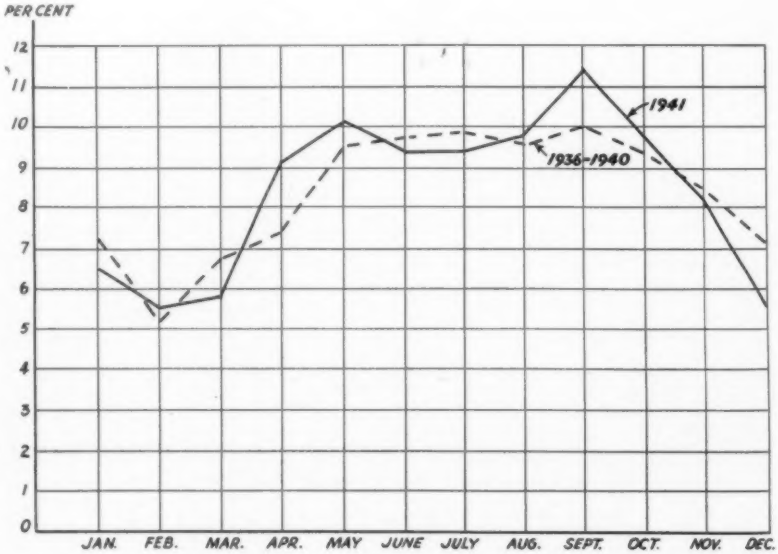


Monthly Fluctuation of False Alarms During 1941 With 1936-1940 Used as Base (100)

The norm, moreover, of measuring the percentage of false alarms used in this article is an obviously inaccurate one. It arrives at a percentage by comparison of false alarms as against total alarms. This is patently unscientific. Suppose that during a given month there was an average of 35 false alarms per day out of a total of 100. The false alarms would constitute 35% according to this method. Let us assume that during the following month, there was a fire prevention drive or some other factor which decreased the number of genuine alarms from an average of 65 to 35 per day, and the false alarms remained the same. (The factors which have to do with the cutting down of genuine alarms need have no bearing whatsoever on the incidence of false alarms). The second month the total alarms would be 70 and the same number of false alarms would constitute 50%, a 15% rise with actually no increase in false alarms.

However, let us apply this method for what it is worth to the months following the campaign when its effect, if any, should manifest itself. In the month of November, 1941, we find that out of a total of 2,818 alarms there were 799 false alarms or that false alarms constituted 28.4% of the total, quite a drop from the 39% referred to in the November article. The December figures are even more striking. Out of a total of 2,457 alarms, there were 514 false alarms which shows that false alarms constituted 20.9% of all the alarms turned in during that month.

Now it will be said and rightly so,



False Alarms by Monthly Percentages. 1941 Compared With Average of 1936-1940

that there is always a drop in false alarms at this time of year. That is true. The reason for it is that November and December as a rule get colder and keep the potential false alarmist indoors. This November, the records of the Weather Bureau show that the temperature was 5.5 degrees higher than the mean average for the past five years and yet this November, the drop which marked the close of the anti-false alarm campaign was far more precipitous than the average November drop.

Number High for First Ten Months

Nineteen Hundred Forty-one was running high in false alarm activities for the first ten months, i.e., up to the close of our campaign, 1941 ran an average of 68 false alarms **higher** than the first ten months of 1940, and 60 per month above the average for this period for the last five years. Since the close of the campaign, however, 1941 shows an average monthly **decrease** of 111 over the corresponding months of November and December, 1940, and an average of 45 per month decrease over these months for the past five years, and December is the lowest December for the past nine years. There were 227 less false alarms in December, 1941, than there were in December of 1940, a decrease of 30%.

These are, of course, not inclusive but are certainly interesting straws to show the way of the wind. Halloween, the big false alarm day of the year in 1940 showed 94 false alarms; in 1941 coming just at the close of our campaign, there were 53. On Election day of 1940, there were 85, in 1941 there were 40.

The size of this city is such that it takes something almost as cyclonic as a war or a World Series to immediately travel down every last avenue and street and reach every individual. Our campaign, of course, fell far short of that and its full effectiveness has probably not yet been accomplished. One official of the Fire Department stated that in his opinion its full weight may not be felt for as long as a year. We have managed to reach into ever corner of the city and tied up our campaign in a practical way by placing on the fire box, the very instrument that is used in a false alarm, the striking drawing of Mr. Christy. This was made possible through the Board of Fire Underwriters who generously provided the decalcomanias, and which are guaranteed to last for at least eighteen months.

Figures Show Marked Decrease

The figures so far, however, show marked decrease in false alarms. It demonstrates that most of our citizens, even of the type that would be so thoughtless of the rights of others, as to consider turning in a false alarm, can be reached by proper appeals.

There are some, however, who apparently cannot be influenced by such means. For these who persist in this malicious practice, in spite of all that has been done, we have another means. A plan has been worked out, with the full knowledge of Mayor LaGuardia, Commissioner Walsh and Commissioner Valentine, involving the apprehension and prosecution of those who still persist in turning in false alarms, which I believe is the most thorough-going and effective program of this kind that has been attempted.

COLUMBUS FIRE DEPARTMENT PREPARES FOR WAR EMERGENCIES

Auxiliaries Trained, Factory Brigades Organized and Reserve Apparatus Supplied

By Lt. John E. Jordan

THE regular fire fighting equipment at Columbus, Ohio, a city of 325,000 population, consists of 19 engine companies, 5 aerial trucks and 3 service trucks. During the past year, the fire department, under Chief Edward P. Welch, has purchased three twelve hundred and fifty gallon, and 7 seven hundred and fifty gallon pumps.

In addition to the pumps, one quintuple combination truck, one foam generator, and 2 new rescue squad cars were placed in service. A new communication car equipped with a voice amplifying system and two-way radio enables Chief Welch to keep in contact with several fires that might be burning in different locations at the same time.

At multiple alarm fires, the communication car is set up as an auxiliary fire headquarters, communication with the fire alarm office is maintained with the 2-way radio and orders to all engine houses can be relayed over the fire department public address system which connects all of the houses with the fire alarm office.

By using the voice ampliers, Chief Welch is able to issue orders over a large area. This is particularly valuable in notifying men in upper stories of unsafe conditions. By using a 200-foot extension cord and a "mike", men wearing gas masks can enter a smoke or gas filled building and issue orders to those on the outside as to what action to take. Orders can also be given from the top of an aerial ladder where a better view of the fire building can be obtained.

The city still has on order, three one-thousand-gallon-pumps and two eighty-foot aerial ladders. Fifty-five new men were appointed in 1941.

An angle, perhaps, new in fire protection, has been developed by Chief Welch. Instead of following the usual practice of junking old equipment, it is overhauled in the fire department shops and stationed in different engine houses.

The off-duty firemen are organized into companies to man the extra equipment stationed near their home. In this way there is a regular force of the on-duty men and a reserve force of an equal number of off-duty men.

Ten of the rebuilt pumps and one service truck are now in service. Three pumps and two aerials will be added as soon as the new equipment is received. This will give Columbus a reserve fire fighting force of 13 pumps, two aerial trucks and one service truck, manned by off-duty firemen and trained volunteers.

When war was declared on the Axis powers in December, the Firemens' Union, Local No. 67, notified Mayor Floyd F. Green and Chief Welch that the firemen would work any number of hours necessary during the emergency.

In March, 1941, months before war was declared, the fire department drill school began organizing and training factory fire brigades and a volunteer force of auxiliary firemen composed of members of the American Legion.

New Quintuple Fire Truck Recently Received by the Columbus, Ohio, Fire Department

Since this plan was inaugurated, fire brigades have been established in most of the Columbus factories doing defense work. More than 600 factory employes and 150 Legionnaires have received this training. The Legionnaires cooperate with the regular city fire-fighting forces at extra alarm fires.

The factory brigades have already proven their value by controlling several factory fires until the arrival of the regular city fire department.

In order that sufficient officer personnel would be available to handle volunteers during emergencies, all vacancies in the officers ranks have been filled and thirty-four privates were promoted to the rank of corporal.

NEW ENGLAND SECTION, I.M.S.A. HOLDS CONFERENCE AT BOSTON

Air Raid Signalling Systems Featured at Special Meeting

By Alton Blackington

MORE than 100 members of the New England Section of the International Municipal Signal Association filled the Canadian Room of the Hotel Manger in Boston on Jan. 28th and 29th to listen to papers read by experts on civilian defense, communications systems in wartime, the telephone systems as channels in emergencies, blackouts and a report of the short wave committee.

The special meeting brought delegates and members from all parts of New England and they were welcomed by Leo O'Bannion, supt. of the Boston Fire Alarm system in the absence of Comr. William Arthur Reilly. Mr. O'Bannion complimented the members on being alert to the dangers of sabotage and the extra hours put in by signalmen in order that systems, so vital in any emergency, might be kept to maximum efficiency.

Civilian Defense Discussed

The first speaker of the afternoon session was John M. Loughlin, New England Regional Director of Civilian Defense, who lost no time in telling of the organization, its pertinent part in the Office of Emergency Management, and its policies in regard to air raid warnings, signals and plans for handling the public interests when the blitz comes.

"The O.C.D.," he said, "was organized by Presidential order on May 20th 1941. Its first job is to coordinate—and cooperate with the various state set ups. Secondly, it is a channel for distributing information to the various state organizations, and the Massachusetts policy has been copied and adopted by communities all over the country."

"We have adopted a uniform air raid alarm signal, the first of its kind in the country—a series of short blasts for the alert and long blasts for the "all clear." By having a uniform system throughout the densely populated New England states, we achieve the results we aim for. People who live in Providence, R. I., might be in Boston when the air raid warning was sounded. They would recognize it at once, because it is the same kind of signal they have in Rhode Island.

"A plan for the protection of people in churches, theatres, stores, schools has been carefully devised so that citizens travelling from one state to the other will know exactly what to do when they hear the warning alarm. New England is first in Civilian Defense work and already we have 1,400 units in this compact area. It had all been worked out long before the attack on Pearl Harbor and within a few hours after that tragic event, 600 report centers were on duty 24 hours a day—and have been ever since. We are happy to say," he said in conclusion, "that here in the New England States we have more Report centers, Civilian Defense workers, wardens and auxiliary firemen than all of the rest of the country put together."

The Telephone in Defense

The part that the telephone will play in the great emergency was ably described by George Hinckley of the New England Telephone & Telegraph Co. He cited the advantages of its flexibility, adaptability, and its ever present dependability on a 24 hour basis.

"Air raid warnings," he said, "are transmitted after the enemy has been located by planes offshore, by ships, blimps and observers. Also by listening devices and by telephone service the proper authorities are informed of the approaching planes. The observation posts in turn transmit their information to the central office where all reports are "screened," the number of planes is determined and the pattern of attack is planned."

With this information at hand the army decides whether to go out to meet the attackers or pass the news of the impending air raid on to the Civilian Defense centers. The civil air raid officer causes the alarm to go out to the regional warning centers. In Massachusetts there are 9 such stations located in Pittsfield, Springfield, Worcester, Fitchburg, Lawrence, Brockton, Fall River, Barnstable and Boston. Besides these regional warning centers there are 17 district warning centers.

At the first sight of enemy planes the army notifies the Regional Warning Center who in turn calls the District Warning Center and the 1st or "yellow" signal is passed—this signal being a confidential one.

The 2nd alarm, or "blue" signal is considered a second degree of caution and is likewise confidential. The 3rd, or "red" signal is one denoting action and serves as the public's first air raid warning—a series of short blasts - or bells being rung quickly for a period of two minutes.

After the attack is over the 4th or "white" signal serves as the "all clear" and is obtained by long blasts or the slow tolling of bells.

"Toll service," explained Mr. Hinkley, "will be the same in wartime as in normal peacetmie, but unless there is a curtailment of personal calls, the lines will be jammed and service interrupted thereby." After Pearl Harbor there were many thousands of calls from customers, anxious to find out if "wifey" or "hubby" was safe and he urged his listeners to impress upon the public the great need for cooperation in times of raids or blackouts in order that the business of the army, navy and civilian defense corps might not be interfered with.

Spotted thru the neighborhoods of our cities will be street wardens, one to every 15 or 20 homes, whose duty it will be to determine the damage of the raid and extent of fires in his immediate locality. The information that they will gather will be phoned into the central message room where there will be one phone for each 10,000 persons.

Damage to property, loss of life, fires and other items of interest will be plotted on a huge map with stick-pins, a report will be made out and multigraphed and handed to couriers—Boy Scouts perhaps, who will rush this report to the Chief Air Raid Warden and in turn, he will give the information to the officers of the Police, Fire, Red Cross, Public Service and Utilities, Medical Director, Gas, Light and Power Companies.

The plotting officer, plotting clerk and filing clerks will record the information obtained and pass it on to the report centers.

As there will be representatives of the Police, Fire, Gas, and Power companies in this central depot, all they will have to do when the Chief Air Warden reads his report is to pick up a 'phone and give the message to their own organization. Tests have proved that this system, complicated tho it may appear to the uninformed, will transmit information in from 60 to 90 seconds.

The maps used for plotting will show all principal streets, public buildings, fire and police stations and hospitals, and by means of colored pins a record can be kept of bombings, fires, etc. The extent of fires and the curtailment of same can likewise be recorded so that all who are stationed in the report center can tell at a glance just what is going on.

Mr. Hinkley spoke of the hospitals which already have made plans for emergency work; how switchboards have been divided so that all calls would not be handled on one trunk line. How nurses' homes are being made ready for patients during a bombing. He told of one hospital that has acquired two mobile units, one vehicle big enough to transport 24 doctors and nurses to the scene of trouble; another with surgical supplies and first aid equipment to follow. In time of trouble the doctors and nurses would be summoned by the public address system already in the hospital; and in practice raids it has been found that, from the time the alarm was given and the cars brought from the garage to the hospital, supplies loaded on and staff assembled, less than 5 minutes time was taken for this emergency mobilization.

Referring to telephones, he stated that in some places it might be advisable to have pay station 'phones changed to

(*Continued on page* 182)

THE ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

DEVELOPING AUXILIARY FIREFIGHTERS

MAINTAINING interest of auxiliary firemen in the course of training and in their work subsequent to completion of their schooling has proven a difficult problem in some Fire Departments. Others have found ways to keep interest alive.

Enrollment of auxiliaries in sufficient number has constituted no task, according to the reports from cities throughout the country.

Insofar as training programs are concerned, they vary widely in different localities and in different sized cities.

In this Round Table, the subjects above are discussed at some length, and the view and practices of Fire Chiefs of a representative group of cities large and small are given.

The information presented should prove of interest and value to those now conducting, or planning to conduct, auxiliary firemen training courses.

The Round Table topic for treatment next month is given in the box on the following page. Readers are invited to participate in the discussion of it. Send your comments to Round Table Editor, FIRE ENGINEERING, 24 W. 40th Street, New York City.

HERE IS THE PROBLEM

1. **Have you had any difficulty in enrolling your quota of auxiliary firemen?**
2. **Do you find interest on the part of auxiliaries lessens after the novelty wears off?**
3. **What methods do you employ for maintaining interest?**
4. **Have they proven successful?**
5. **Do you give your auxiliaries any special privileges? Any uniforms, badges, arm bands, or other means of identification?**

Discussion of the Subject

John F. Moroney, Chief, Meriden, Conn.: At the present time, two classes of auxiliary firemen are being trained. The two classes total seventy men. Our goal for Meriden (a city of 40,000) is to train 150 men in the auxiliary fire classes. The present classes have been going on since the early part of December. Their work will be completed in March.

The interest shown by the enrollees has been exceptionally good and the attendance has been fine.

We do expect to furnish them with arm bands, and we allow them to come into any fire house whenever they wish.

As to the methods used to maintain interest, we just give them straight work on fire fighting.

J. E. Parrish, Chief, San Diego, Calif.: In San Diego we have not had trouble enlisting our quota of auxiliary firemen. At present we have about 750 men drilling one night each week. We do not have enough spare equipment to properly equip them all yet.

They are trained in handling fire fighting equipment, first aid, decontamination and military drill.

We hope the so-called "Second War Powers Act (S-2208) will be enacted. Section VIII of this legislation provides for compensation (in event of injury or death) to persons in the civilian defense protective services who have been duly appointed by an official agent of the U. S. Government.

We try to make the drills as interesting as possible. Time will tell if we will be able to maintain interest. Arm bands and certificates will be issued when the training course is completed.

Charles A. Blunt, Chief, Everett, Wash.: We have had very little difficulty in enrolling auxiliary firemen. We have divided the town up into seven sections, with twenty-five men to a section. A temporary chairman was selected for each section and a course in fire fighting given. This course is divided up into about seven meetings. After this is completed, we give each unit a trailer with 650 feet of hose, one ax, shovel, rake, nozzle, four buckets and a piece of rope. They then have meetings of their own once a week or as often as they feel they should. At these meetings they lay hose, and go through the regular problems of fire fighting, but do not turn on the water. This is to keep the hose from getting wet and going to pieces from lack of proper care. They also have social gatherings. This, we have found, keeps them together after they have finished the school work which we give them.

Oscar A. Grab, Chief, New Rochelle, N. Y.: Approximately 250 men enrolled at the start of the auxiliary firemen training course. We have found that interest lessens after the novelty wears off.

We still have four classes drilling. I have supplied them with a complete list of each apparatus and every piece of equipment on them. Each class now takes a different fire station to acquaint themselves with the tools, etc., on the apparatus. Each auxiliary fireman has a booklet on our fire alarm code. I am now having a series of lectures made up and each auxiliary fireman will receive a complete set. In addition, each man will receive a copy of a reference and training chart on chemical warfare agents. The men now in the auxiliary fire corps have done the same actual and practical drilling as our paid men, working on our six-story drill tower and they have done exceptionally good work. They have given demonstrations at the drill tower and have received practical instruction on incendiary bombs and used all types of extinguishers we have in our department.

It is necessary to give them something to do of the above nature at all times. We keep a record of roll calls at each training session and those members who fail to regularly attend are dropped from the rolls. Each class elects its own captain and lieutenants and, of course, they are drilled by paid members of the department.

They have cards from the Defense Council with their fingerprints and pictures on them. I also stamp "Bureau of Fire" with my signature on the cards. This card allows the auxiliaries to enter fire lines to observe the workings of the department. They are not to enter or assist in any way without orders from the commanding officer at the fire. The Police Department has been notified to honor their cards. This Bureau has recommended the purchase of boots, coats and helmets for the auxiliaries. This recommendation has been approved by the city officials. I might add that they also receive a Certificate of Fitness from this bureau.

Thomas J. McCarrick, Chief, Revere, Mass.: We have an enrollment exceeding the number first planned.

Drills have been in progress since December and to date the members of the auxiliary fire force are serious and enthusiastic. Whether or not the same interest will continue is entirely problematical.

The auxiliary members, with restrictions, are allowed to organize socially and I think our plan along this line will provide sufficient interest to insure the efficient operation of the force for the duration of the war. It is not our intention to maintain such a force after the conclusion of the present emergency.

The city is divided into districts and drills are held five nights a week with five captains acting as district drill masters under the supervision of the department drill master.

We have not purchased any equipment for the members. However, a means of identification will be provided after the applicant has qualified for membership.

John Gibson, Chief, Mount Vernon, N. Y.: To date no difficulty has been experienced in enrolling auxiliary firemen.

DEPARTMENT OF PUBLIC SAFETY
DIVISION OF FIRE

This is to certify that NUMBER 123

John Doe

HAS COMPLETED THE FULL COURSE IN FIRE FIGHTING FOR NATIONAL CIVILIAN DEFENSE IN THE DIVISION OF FIRE, DRILL SCHOOL, UNDER THE DIRECTION OF CHIEF E. P. WELCH. HE IS ENTITLED TO PASS THROUGH THE FIRE LINES, AND RENDER ANY ASSISTANCE THAT HE MAY BE OR DIRECTED TO DO.

DATE 2/3/42 E. P. Welch CHIEF

NOT TRANSFERABLE

Membership Card of Columbus, O., Auxiliaries

We must bear in mind that auxiliary firemen, as a rule, know nothing of the work of a fireman. They believe that a fireman does very little work, except when an alarm of fire is sounded. But I have found as their training course continues that they think different, and as the glamours wears off, they lose interest. Therefore, we must make the training interesting.

I believe that it is a mistake to have lectures on the various fire department topics. It is my opinion that auxiliary firemen should be instructed in the handling and use of tools, appliances and equipment of the fire department. I firmly am convinced that if they are trained in the various evolutions in the same way as a rookie fireman, their interest will be retained.

We have not as yet granted any special privileges, uniforms, arm bands, or other means of identification.

L. L. Petrey, Chief, Mobile, Ala.: We are at present training 510 auxiliary firemen. We have them divided into four groups, attending instructions on Monday, Tuesday, Wednesday and Friday nights of each week. Each man gives two hours of his time each week for a period of twelve weeks to complete this course.

We intend to continue our instructions after the twelve weeks are completed and have each man attend class one night a week in some other subject, probably in first aid.

Upon completion of the twelve weeks course, we give each auxiliary an arm band and a pass.

Napoleon Taupier, Chief, Pawtucket, R. I.: We have not had any difficulty enlisting our auxiliary firemen, having enrolled about 125 men to date. This is a good percentage in proportion to our population. We have found that the interest of these men has increased as the training progressed.

Instructions are given in the general idea of fire fighting and also lectures in the makeup and how to handle the different bombs. Roll calls are held each time and members are shown the regular fire apparatus and how to use each fire fighting tool on same.

The interest shown by the men has not decreased since the first meeting, and we feel that this proves that the methods used are successful.

The auxiliary firemen are to be equipped with fire coats, boots and helmets, but not uniforms.

Walter S. Blanton, Chief, Savannah, Ga.: We have had no difficulty in enrolling auxiliary firemen. We have found, however, that interest lessens after the novelty wears off.

The auxiliary firemen are given regular inside drills and lectures, and outside drills with apparatus.

After they have studied a certain number of hours and proved satisfactory to the Chief, arm bands and identification cards with finger print and photograph will be issued to each man. Included in the personnel of the auxiliary fire corps are sixty-five men from the office of the Central of Georgia Railway Company, who are very much enthused. On Monday night, February 2nd, at 10:20 o'clock we had a general alarm fire. Some of the classes were in session and they responded and rendered valuable service.

Harry J. Brown, Chief, Reading, Penna.: The Reading Volunteer Fire Department is unique in the respect that we have 7,259 members. You can readily see that we have a large number of firemen to carry on. Members are instructed in the methods of handling incendiary bombs, the use of gas masks and the different kinds of gases used in warfare.

We have no means of identification, but have been promised some by our City Defense Committee.

We have had a course of instruction by men who have graduated from a school at State College under the Pennsylvania Firemen's Training School. This has been done for the past number of years.

Carl J. Kiessling, Chief, Worcester, Mass.: We do have some difficulty in enrolling enough men. In my opinion, this is because we require so much of the men's time to complete our course. We firmly believe that it is necessary to have all men in the auxiliary properly trained in fire fighting if they are to be used in an emergency. The lessons include such items as discipline, receiving calls for fires and checking of running card, watch room duty, forcible entry, ventilation, handling of hose lines and care of hose, care and use of all small tools and appliances. They are also trained in the use of all types of apparatus in the department, raising of ladders,

(*Continued on page* 205)

HERE IS THE PROBLEM FOR THE NEXT ISSUE

1. **In view of the threatened rationing of gasoline, and the possibility of persons storing it on premises or carrying extra supply in unsafe containers, what steps would you suggest to prevent such practices?**
2. **Have you legislation already enacted which would enable you to control the hazards of unsafe storage of gasoline around homes or places of business?**
3. **Briefly, what does such legislation include?**

NEW BEDFORD FIRE DEPARTMENT

VOLUNTEER CIVILIAN AUXILIARY FIRE FORCE

Name_____

Address_____

Telephone_____

Occupation_____

Employer's Name_____

Employer's Address_____

Age_____ Height_____ Weight_____

Married_____ Single_____

I am willing to become a member of the Auxiliary Fire Fighting Force of the City of New Bedford in order to further protect the lives and property in the said City of New Bedford without compensation.

I am willing to abide by the rules and regulations of the fire department as they are or may be established by the Chief of Fire Department of said city; while serving in the Auxiliary Fire Fighting Force.

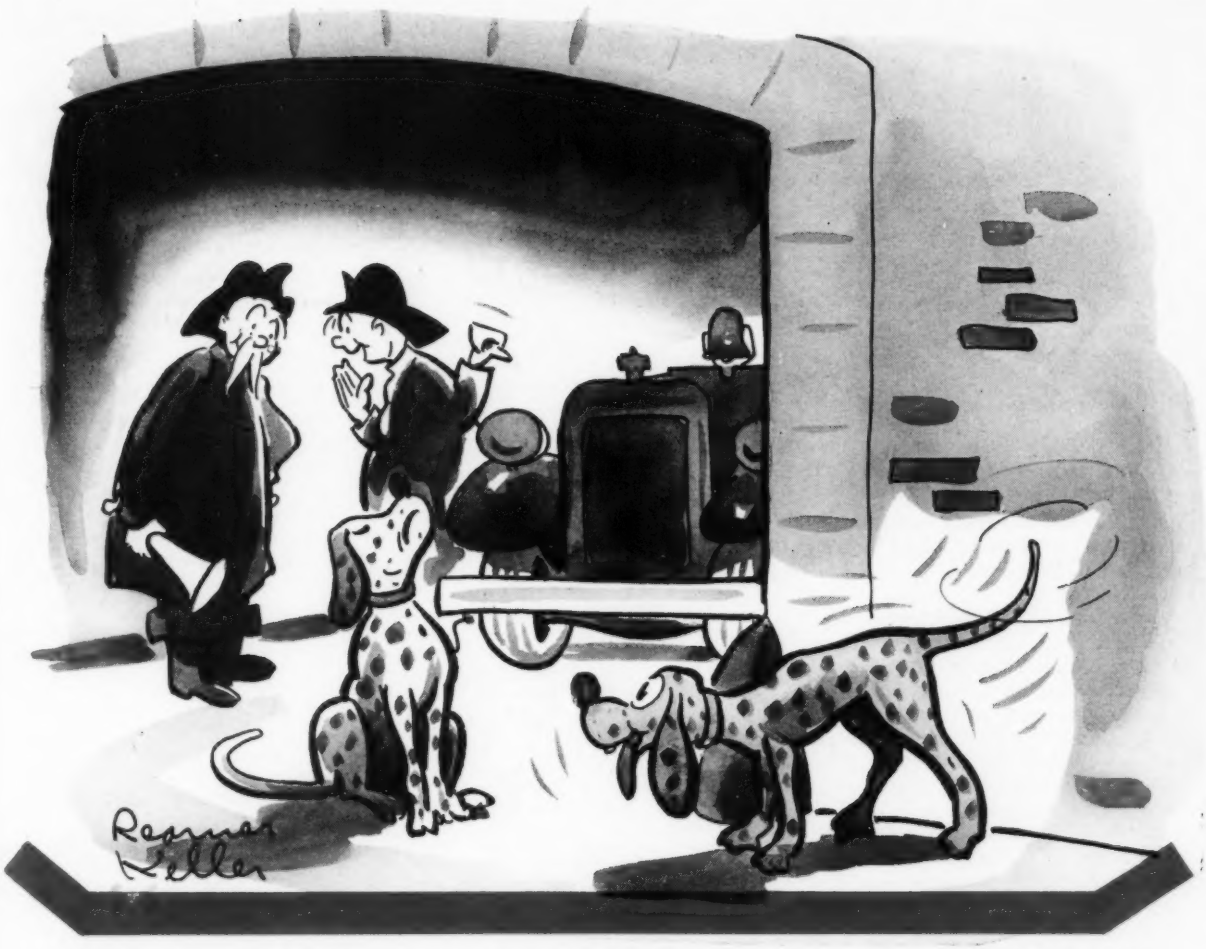
I am willing to take a course of training and instructions to be given to the Auxiliary Fire Fighting Force by the regular force of the fire department of New Bedford.

I am willing to respond to an emergency call issued by the Chief of Department in case of emergency.

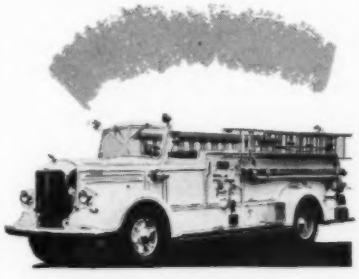
I hereby agree that I assume all risk of injury resulting from my participation in the auxiliary fire fighting force, so-called, of the City of New Bedford during the course of training or during any other activities of that force in which I participate; and I further agree that the City of New Bedford shall not be liable for any damage or injury to my person or property as a result of my participation as aforesaid.

Date_____ Signature_____

Enrollment Blank Used in New Bedford, Mass.



He's from Company No. 2—they don't have a Mack!



Type 80—750 gallon centrifugal triple combination pumper, recently delivered to Ogden, Utah, fire department.

Keep your tail up, Dal, old boy—tough luck never lasts forever! Macks are constantly being added to the equipment of on-the-ball fire companies from coast to coast. Maybe, before this very year is out, your own company will boast a Mack and you won't have to eat crow for any man's dog!

Mack fire apparatus is the product of the greatest engineering and manufacturing resources in the whole fire apparatus industry—is carefully designed from wheel rim to cab top to do specific jobs as well as they can be done. And every vital part is made in Mack factories, under the rigorous Mack inspection system, to the unusually exacting Mack standards of performance.

When service is needed, it can be got, quickly and economically, from any one of 70 direct Mack factory branches! Write for information on this superior fire apparatus today!

MACK MANUFACTURING CORP., FIRE ENGINE DIVISION, LONG ISLAND CITY, N. Y.

Mack

The Mack fire apparatus line includes triple and quadruple pumpers from 200 to 1500 gallon capacity, hose wagons, city service ladder trucks, squad cars—comprising 14 distinct and specialized models

Questions and Answers

NOTE—Readers are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified

Some Hose Line Calculations

To the Editor:

I would appreciate your answering the following questions:

1. 1500 feet of 2½-inch cotton rubber lined hose is laid from a pump operating at 120 pounds pressure. It is siamesed into two 1½-inch lines each 100 feet long and equipped with ½-inch nozzles. What would be the nozzle pressure? What would be the discharge? What would be the friction loss? What would be the friction loss at the open butt?

2. 1000 feet of 2½-inch rubber lined hose siamesed into one line of 1½-inch hose fifty feet long and equipped with a ½-inch tip is laid from a pumper operating at a pressure of 120 pounds. What is the nozzle pressure? What is the friction loss? What is the discharge? What would the friction loss be in the 2½-inch hose at the open butt?

3. What is the pressure on a line (that is connected to a hydrant) 800 feet long. There is no nozzle attached to the line. The line is 2½-inch cotton rubber lined hose. Hydrant pressure is 81 pounds. What would the friction loss be at the open butt? What would be the discharge? What would be the pressure at the open butt? J.H.

Answer: The solution to Problem 1 is as follows: First change the layout to a single line of 2½-inch hose.

A 100-foot length of 1½-inch hose is equal to 100 ÷ .074 = 1,370 feet of 2½-inch.

Two such lines of 2½-inch hose (changed from 1½-inch) are equivalent to 1370 ÷ 3.6, or 380 feet of 2½-inch hose.

Thus the entire layout is equivalent to 380 + 1500, or 1880 feet of 2½-inch hose.

The next step is to combine the two nozzles into a single nozzle of similar area.

½ × ½ = .25
½ × ½ = .25
.25 + .25 = .50

The square root of .50 = .707 inches diameter. This is the diameter of the nozzle equal in area to the ½-inch nozzles. The nearest standard size nozzle to this is ¾-inch.

Using the ¾-inch nozzle, the solution for nozzle pressure is:

N. P. = E. P. ÷ (1 + KL)
K = .042
L = 37.6
N. P. = E. P. ÷ (1 + KL)
= 120 ÷ (1 + .042 × 37.6)
= 120 ÷ 2.5792 or 2.59
= 46.51 pounds pressure at the combined nozzle, or the pressure at each ½-inch nozzle.

The friction loss from the engine to the nozzle is 120 — 46.51 = 73.49 pounds.

$$\text{Discharge} = 29.7 \times d \times d \times \sqrt{P}$$
$$= 29.7 \times .75 \times .75 \times \sqrt{46.51}$$
$$= 113.9 \text{ gallon per minute}$$

There is no practical method of solving for the discharge from the open butts on the two 1½-inch lines attached to the 1500 foot line of 2½-inch hose. The discharge from each butt might be assumed, and then the problem solved to find out if this particular flow would result in an engine pressure equal to the 120 pounds. If not, a different pressure at each butt would have to be assumed. This method of trial and error would have to be followed until figures show that the assumed butt pressures on the two 1½-inch lines were approximately correct.

Answer 2: First change the layout to a single line of 2½-inch hose.

50 feet of 1½-inch hose equals 50 ÷ .074 = 676 feet of 2½-inch.

Then the layout is equivalent to a single line of 2½-inch hose 1,000 + 676 = 1676 feet in length, equipped with ½-inch nozzle.

N. P. = E. P. ÷ (1 + KL)
E. P. = 120 pounds
K = .0115
L = 33.52
N. P. = 120 ÷ (1 + .0115 × 33.52)
= 120 ÷ (1 + .385)
= 120 ÷ 1.385
= 86.6 pounds.

Friction loss is 120 — 86.6 = 33.4 pounds.

As in the first problem, the trial and error method has to be used here for finding the flow from the open butt on the 1½-inch line.

Answer 3: The formula for solving for butt pressure on a line of hose is as follows:

Open butt pressure = engine pressure ÷ (1.1 + KL)
K for 2½-inch open butt is 3.35
L = 800 ÷ 50 or 16
Then open butt pressure
= 81 ÷ 54.7
= 1.5 pounds approximately
Friction loss is equal to 81 — 1.5 = 79.5 pounds.

$$\text{Discharge} = 29.7 \times 2\tfrac{1}{2} \times 2\tfrac{1}{2} \times \sqrt{1.5} \times .90$$
$$= 204.6 \text{ gallons per minute, or 205 gallons per minute approximately.}$$

True or False

To the Editor:

Please answer the following true and false questions:

1. Complete exclusion of air is necessary to extinguish a fire by the smothering method.

2. In the centrifugal type pump the discharge is more nearly continuous than in the rotary type pump.

3. If the hydrant capacity is sufficient, it is not necessary to put a pump in operation.

4. Diffusion by convection is more rapid than diffusion by conduction.

5. When a large volume of water is required, the reciprocating pump is almost universally used.

6. All flammable vapors diffuse rapidly.

7. The dry powder extinguishers, which are largely sodium bicarbonate, exert a slight cooling effect and a smothering effect due to carbon dioxide gas given off when heated.

8. Commercial butane in the liquid form has to be kept under 65 pounds pressure when the temperature is 100 degrees F.

9. Methyl chloride does not give a definite warning of its presence in dangerous concentrations, but when used as a refrigerant it usually contains substances which give adequate warnings.

10. Commercial propane has to be kept under 125 pounds pressure when the temperature is 100 degrees F.

11. Some substances contain oxygen to such a degree that they become fireproof.

12. Dichlorethylene used as refrigerant is an anaesthetic gas which is most easily discernible by its pungent odor.

W. C.

Answer: The answers to the questions you submit we believe should be as follows:

1. False.
2. True.
3. False.
4. True.
5. False.
6. False.
7. True.
8. True.
9. True.
10. False.
11. False.
12. False.

Solution for Engine Pressure

To the Editor:

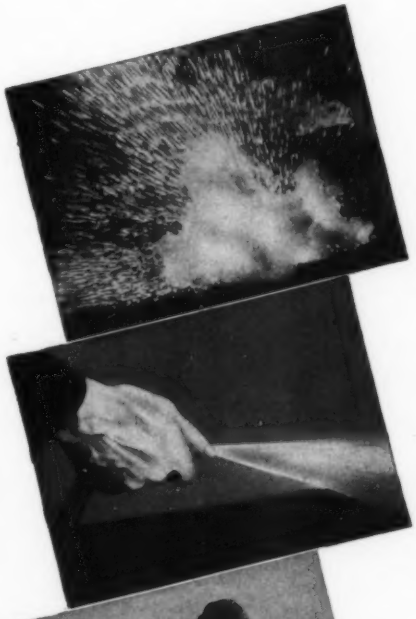
In your book "Fire Service Hydraulics," on Page 80, an approxi-

★ORDER YOUR COPY NOW

FIGHTING the FIRE BOMB

The Training Film Approved By
the Training Section of the
OFFICE OF CIVILIAN DEFENSE

Produced under the Technical Supervision
of the
CHEMICAL WARFARE SERVICE, U. S. ARMY
and the
NATIONAL FIRE PROTECTION ASSOCIATION



"A picture is worth a thousand words" — that is graphically demonstrated in this authentic sound film, "Fighting the Fire bomb." The film makes it easy for you to teach the members of your department, auxiliary firemen, and your community what a fire bomb is, how to prepare for it, how to fight it, and the approved equipment to use.

One fire chief says of the film, ". . . this picture makes you feel confident . . ." Another says, ". . . It is an education in itself, and I earnestly hope that everyone in the country will see the film."

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mate value for K can be obtained by using the formula $K = D \times D \times D \times D \div 10$.

I applied this formula for Problem 88 on Page 75. The K obtained (.0625) varied greatly from the table value of K (.0115). The result consequently was wrong.

I then converted the 1½-inch hose to 2½-inch hose and used the table value of K (.0115) for ½-inch tip and 2½-inch hose, and the result was 139.86 pounds against 123.6 pounds as given in the solution.

The error seems very great, so I wish that you would advise me whether the problem was solved correctly. L.J.S.

Answer: Your answer for engine pressure is closer to actual figures than by our solution by use of the formula given. However, this is an exception rather than the rule, for a check-up of other layouts involving different lengths of hose shows that the methods given in "Fire Service Hydraulics" produce much more accurate results over the range.

In the first place, in your problem, you state you use as the value of "K" = .0625. This should be .00625.

For your information, we may say that the engine pressure you secured was but a couple of pounds away from the actual engine pressure found by adding nozzle pressure to friction loss, but for example, let us take a 500-foot line of 1½-inch hose with a ½-inch tip.

Assume a nozzle pressure of 36 pounds.

$$\text{E. P.} = 36 \times (1 + .104 \times 10)$$
$$= 36 \times 2.04$$
$$= 73.44 \text{ pounds.}$$

At 36 pounds the discharge from the ½-inch nozzle is 44.6 gallons per minute. The friction loss in 100 feet of 1½-inch hose for a flow of 44.6 gallons per minute is 8.4, and for 500 feet, 42 pounds.

Engine pressure is equal to friction loss plus nozzle pressure, or 42 + 36, or 78 pounds. This isn't far away from the value secured by use of the formula.

Using the method you suggest, the engine pressure solves out to be 91.89 pounds, which, you will see, is quite far away from actual performance figures.

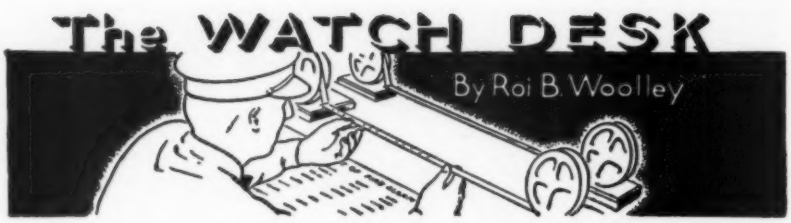
Merrill Made Chief at Council Bluffs

Waldo Merrill, a twenty-year veteran of the Council Bluffs, Ia., Fire Department was recently named Chief of the Department.

Merrill joined the department in December, 1920. He has served as captain at station No. 5 since 1935. He was also one of the drivers of the last fire horse teams in the city, serving in 1923, just prior to the city completing the motorization of all its equipment.

Merrill succeeds William Sorenson, who retired on pension.

Merrill, who served in Company K, 168th Infantry, as an automatic rifleman during the World War, is active in veterans' organizations. He is past president of the local chapter of Veterans of Foreign Wars.



Our inquiring reporter overhauls the firemanic news of the day

Another Cat-astrophy

Unnamed Long Island 'clipper' sends us item about the cat, found in the attic of the fire house of Hose Company 1, Little Ferry (L. I.) which was suspected of having gummed up alarm system. Seems that when an alarm was turned in for a brush fire, the wrong signal was blown on the siren, taking the Vamps about a mile in opposite direction from real blaze. The feline is believed to have pursued a mouse into the box in attic housing the siren mechanism. We dunno what happened to kittie!

* * * *

They Had Taking Ways!

Over in Bethlehem—not Palestine, but Pennsylvania—Lehigh University Students pitched in to help the firemen fight a fraternity house blaze, but after it was over, the irate firemen reported as missing: 2 rubber coats, 9 pairs of boots, 8 helmets, and last but not least, even the Asst. Chief's shield! We suggest somebody make a search of the other frat' houses!

* * * *

Weisberger Reports

Demon clipper and scribbler, Johnny Weisberger, New York City, sends us another batch of 'hot' news. Among the items we find these gems: Mrs. L. R. Proctor, Olympia (Wash.) was basking in warmth of her open fireplace. Suddenly a ball of fire zoomed out of the flames and whizzed around the room. Mrs. Proctor, with visions of singed draperies and blackened walls, gave chase. She finally caught the 'fire-ball' and put it out—and outside. 'Twas an unwise old owl with a set of thoroughly charred tail feathers. Wot a tale!

* * * *

Walter Cate, church janitor, got his dates mixed, and gave the vamps of Lafayette (Ind.) the jitters. Un huh—it was a Saturday morning, when suddenly the church bell tolled loud and long. Men dropped their tools and hustled to the scene. Streets buzzed with bicycles, autos, nags and excited pedestrians. But at the church, where they were summoned by the alarm, they only found Cate, much obfuscated because he had got his dates mixed—tolling the bell for "Sunday services" when twant the sabbath at all.

* * * *

Julius Greck, Asst. Chief, So. Fallsburg N. Y.), is sort of one-man F.D. When flames billowed up from his fish market (which he runs when not fire fighting) he sprinted to fire house, sounded the alarm, drove the truck back to the market and went to work on the blaze so well that when the Vamps arrived there wasn't much for 'em to do. Make mine filet of sole, pleeze!

One for Ripley! Search for food by mice nearly started a conflagration. Looking for a snack in the handbag of Mrs. Natalie D. Ide, 34, Boston (Mass.) the rodents nibbled matches and started a fire. Helen Epps, a roommate, discovered the blaze and together the two women managed to extinguish it before it spread through the apartment. Brothers said *"here's one fire that was in the bag before we got there!*

* * * *

Write Your Own Caption!

We quote this little tidbit from Ted Ashby's column in the Des Moines (Ia.) Tribune, (passed on to us by newshawk Earle Robinson):

"The Volunteer Fire Department at Blairsburg (Ia.) has established what may be a world record for fire-fighting units. By an excellent exhibition of speed and alertness, it managed to arrive at the Elbert Phinney home there before it caught fire."

Can't be that the Vamps sort of suspected there was something phoney at the Phinneys?

* * * *

Speaking of Inventions

This editor is in receipt of a letter from Byrd Davis Jr., located at No. 6 Fire Station, Decatur (Ill.) which is worth quoting in full. He writes:

"I thought this would be a good one for the Watch Desk. Some time ago, a fellow came into the Station and told how he had fixed his roof (wood shingle) so he would know when it had caught fire. He goes up into the attic and places fire crackers at different spots on the underneath side of the roof so that if the roof catches fire it would notify the family day or night. Some fire alarm system!

"I would like to say also how much I like your magazine. I wish it was a weekly instead of a monthly. I can't hardly wait from one month to the next to see what you have in it. I think it is the best magazine for the profession there is. You sure pack it full of interesting and up to the minute information. It makes excellent reference material for a fellow, too. Wishing you and FIRE ENGINEERING *a bigger and better year. . . .*

"Respectfully yours
"(Signed) Byrd Davis, Jr."

We add Brother Davis to our staff of keen-eyed reporters, and his fulsome letter to our collection of reader-bouquets.

* * * *

Hot Off the Tape

Firemen of Jersey City were called to assist police in the siege of John Gary, 67, negro porter, when he barricaded himself in house after killing his step-

(*Continued on page* 200)

Worcester Fire Fighters Put Out Asphalt tank Fire with

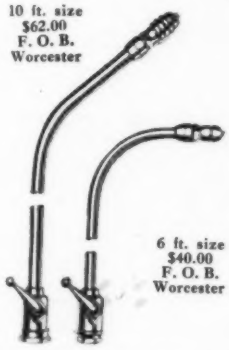
ROCKWOOD waterFOG

Worcester Evening Gazette
February 3, 1942

FIRE TEST GIVEN O. K.

New water fog nozzles purchased by the Fire Department for use against incendiary bombs here had their first workout today and proved to be a highly successful means of dealing with stubborn blazes involving volatile gases, Deputy Chief William M. Carroll said.

They were used for the first time this forenoon when an asphalt tank being thawed at the Public Works maintenance yard, 166 Salem street, became overheated, blew off a manhole cover and burst into flame. Firemen are shown using the new nozzles which brought the fire to a quick halt with only minor damage.



10 ft. size
$62.00
F. O. B.
Worcester

6 ft. size
$40.00
F. O. B.
Worcester

Be sure to specify *size* and *type* of hose thread when ordering WaterFOG equipment.

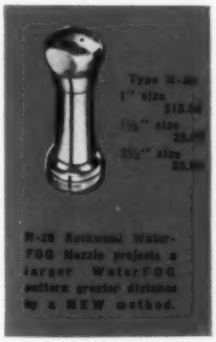
The asphalt tank fire described in this news item is only one example of the many tough fires you can extinguish with Rockwood WaterFOG. Many municipal fire departments all over the United States, are finding WaterFOG their most valuable fire-fighting weapon.

For instance — the handy WaterFOG Applicator shown in the news picture above will extinguish many tough fires in flammable liquids and solvents, such as: kerosene, mineral spirits, paints and varnishes, fuel oil, and even gasoline in small open containers.

It will quickly put out incendiary bomb fires too. Oil and phosphorous type incendiaries are extinguished in seconds. On magnesium-thermit types—Rockwood WaterFOG *safely* accelerates the burning speed of the magnesium . . . causing consumption in a few minutes. And the wide surface coverage of WaterFOG from the Applicator takes care of secondary fires started by the bomb, because it wets down the surrounding area, thus preventing spread of fire.

Illustrated at the left are the two standard sizes of the Rockwood WaterFOG Applicator — 6 ft. or 10 ft. lengths, equipped with ball-type shut-offs. They're easy to use. The operator is shielded from flames and fumes by the WaterFOG. Effective extinguishing action begins at 30 pounds pressure at the discharge end — works even more effectively at higher pressures.

Rockwood N-20 WaterFOG Nozzle



By means of an advanced new method developed by Rockwood research engineers, known as *internal* impingement, the N-20 Nozzle creates both high and low velocity WaterFOG. The *low velocity* particles of WaterFOG with their greater extinguishing action are projected further by means of the proper amount of *high velocity* WaterFOG induced into the low velocity pattern. Thus it is possible to project *low* velocity fog into the seat of a fire and extinguish it from distances beyond the range of previous types of fog or spray-type nozzles. For use on incendiary bombs, flammable liquid and high voltage electrical equipment fires.

Rockwood WaterFOG Nozzles come in four sizes to fit existing ¾", 1", 1½", 2½" hose lines or play pipes. Specify the size nozzle and quantity desired. If you want nozzle to fit existing hose thread give *size* of hose connection and *type* of hose thread. (If you can't identify thread on existing hose give number of threads per inch and outside diameter of male thread.)

Fire Chiefs— recommend this inexpensive nozzle to householders in your community!

Rockwood HomeFOG Nozzle

Extinguishes at low pressures—25 pounds and up. For incendiary bomb, oil burner, defective wiring, trash and other household fires. Attaches to regular garden hose. Underwriters' approvals pending. Buy it at local hardware stores. Only 98c.

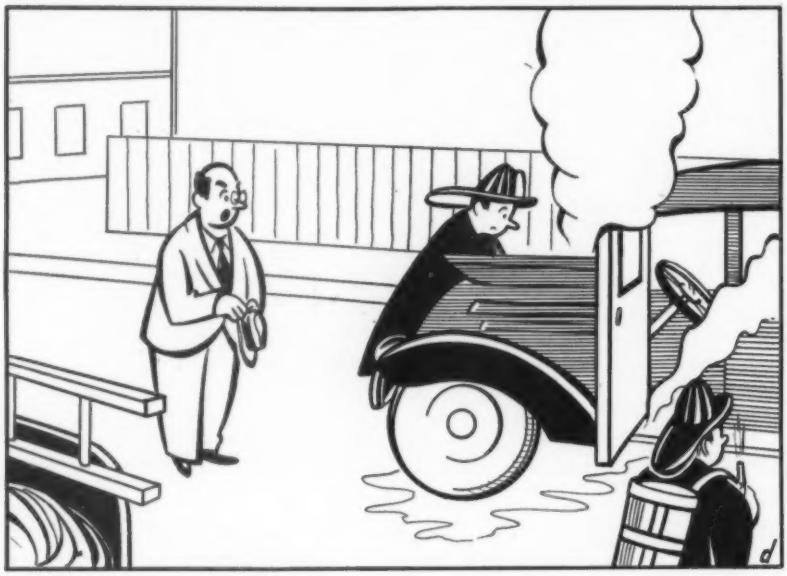
Order from your regular Fire Equipment Distributor

ROCKWOOD SPRINKLER COMPANY

Specialists for 36 Years in the Engineering, Manufacture and Installation of Fire Protection Equipment

54 HARLOW STREET **WORCESTER, MASSACHUSETTS**

FALSE ALARMS



"I Don't Care if the Rest of the Car Burns but Save Those Tires!"

Unexpected

One day in Paradise
Two Fire Chiefs, beaming, strolled
Along the amber walk
Beside the street of gold.
Suddenly they met, and gazed
Into each others eyes—
Then dropped their harps, amazed,
And stood in mute surprise.
As others, of ascended came,
And slowly lingered near—
Heard both at once exclaim:
"Hownheljewgetinhere?"

Consent

"I can't marry you," said the justice of the peace. "If this girl is only seventeen, you will have to get her father's consent."

"Consent," yelled the groom-to-be. "Say, who do you think this old old guy with the rifle is, Daniel Boone?"

"Can you read and write?" asked the judge.

"Wal, I kin read figurin' but I cain't read writin'," said the prisoner.

"Explain yourself."

"Wal, you take on a road sign, I kin read how fur it is, but I cain't read whur to."

Heroic Measures

"Bill had a bad cold and he was undecided as to whether he should stuff it or starve it."

"What did he finally do?"

"Drowned it."

They laughed when I came in with shorts on, but when I sat down they split.

This one is going the rounds of the college campus. If twins are roommates before they are born, what are they after they are born?

Answer: Bosom friends.

Courage

"Why don't you fight against your longing for drink? When you are tempted, think of your wife at home."

"Madam, when the thirst is upon me, I am absolutely devoid of fear."

The blaze in the tenement district had gained considerable headway but the firemen succeeded in saving several scanties in the neighborhood, some of which were occupied.—San Francisco (California) Examiner.

McTavish was pulling out his handkerchief when a fair of false teeth dropped to the floor. He dusted them off carefully and put them back in his pocket.

"My wife's," he explained. "I caught her eating between meals."

A robber was holding up a Pullman car. "Out with your dough, or I'll kill all the men and molest the women," he shouted.

An elderly man said indignantly: "You shall not touch the ladies."

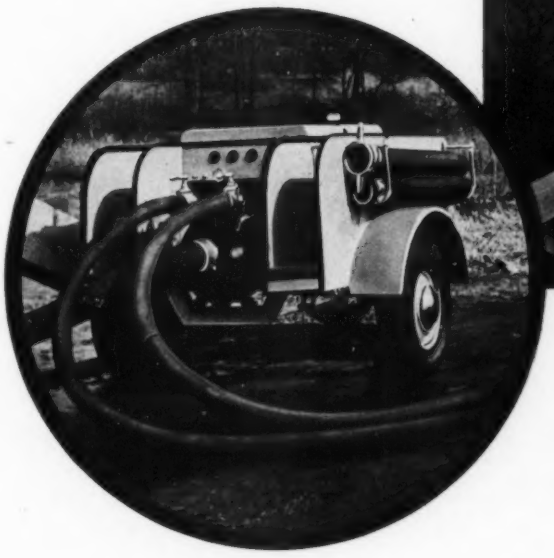
Just then an old maid in an upper berth yelled out, "You leave him alone —*he's* robbing this train."

Doctor: "You've had a pretty close call. It's only your strong constitution that pulled you through."

Fire Chief: "Well, doctor, remember that when you make out your bill."

"Happy Birthday to You. Happy Birthday to You. . . . Happy Birthday, Dear Joey. . . . Happy Birthday to You."

100%
Fire Protection
for
YOUR
Community



by using

SEALAND
FIRE TRAILER PUMPERS
500-600-750 GALLONS CAPACITY

SEALAND Fire Trailer Pumper Units are properly designed and engineered throughout to assure 100% satisfactory service. They are suited to meet today's requirements as Civilian Defense Auxiliary Units, or for regular Fire Department Service.

These big husky units, amply powered, and equipped with dependable Sealand Centrifugal Pumps, are capable of pumping from 500-750 g.p.m.

BEFORE BUYING OR SPECIFYING . . . be sure to send for a copy of our latest engineering data, which will help you to choose the unit most practical for the individual needs of your community.

THE SEALAND CORPORATION 589 RIVERSIDE AVENUE, SAUGATUCK, CONNECTICUT

FIRE TRAILER PUMPERS • CENTRIFUGAL BOOSTER PUMPS • AUTOMATIC FIRE DETECTING & ALARM SYSTEMS
NAVY TYPE FIRE ALARM SYSTEMS • • • NAVY TYPE BATTLE STATION SWITCH BOXES

Manufacturers' Announcements

New Siren for Air Raid Alarm

The illustration herewith shows the new air raid siren developed by the Foster Engineering Company, of Newark, N. J. The siren has a rising sound pitch or howl that reaches its maximum tone in from three to five seconds. It is well adapted for signaling because of

Siren Developed by Foster Engineering Co.

a sharp sound cut-off. It operates on steam or air at 50 to 250 pounds pressure, 425° F. total temperature. It may be secured in all bronze, or steel and bronze construction. Complete information may be had by writing to the Foster Engineering Company at 109 Monroe Street, Newark, N. J.

New Coding Control

In order to provide a method of indicating to the public and employees the danger of air raids and the necessity for blackouts, the Reco motor driven coding control has been developed for use with sirens, alarms, signals, etc. Its action is automatic.

There are two signals: One signals a series of alarms in 15 cycles of raising and lowering tones during a period of two minutes. The other signals a steady "all clear" siren blast for two minutes.

This control is supplied with automatic cut-off and push button start, for 110 V. 60 cycle current. Its size is 5 x 6½ x 4 inches.

Full information can be obtained from the Reynolds Electric Company, 2650 W. Congress Street, Chicago, Ill.

Air Raid Protection Association Formed

Dr. Curt Wachtel, former air defense consultant to the Russian Government, has been named technical director, of the newly formed Air Raid Protection Association for industrial plant safety, which has started functioning in Newark, N. J.

Dr. Wachtel plans to supervise technical surveys of several large plants in Greater Newark area in preparation for installing systems to cope with the effects of aerial bombs, poisonous gases, destruction by saboteurs, and other subversive influences that would retard the production speed of defense industries. The headquarters of the Association are at 972 Broad Street, Newark, N. J.

Practice Incendiary Bombs

Practice incendiary bombs and air raid warning bombs are being manufactured and sold by the Baltimore Fireworks and Specialty Company, 336 N. Charles Street, Baltimore, Md.

The practice bomb is a cylinder approximately 2⅛-inches in diameter by 8 inches in length, weighing about 1¼ pounds. The bomb casing is made of heavy paper while the incendiary material enclosed in the casing is a mixture of thermit (granulated aluminum and iron oxide) and ground magnesium alloy (Dowmetal) scrap, plus a small amount of sulphur.

The bomb is equipped with an ordinary match-ignited 15 second delayed action fuse at one end, which ignites a priming agent that in turn fires the thermit and magnesium mixture.

The fuse end of the bomb casing is provided with four vent holes which are covered with a strip of adhesive tape to prevent loss of the incendiary material during shipment and handling. This tape should be removed before lighting the fuse.

Pressure Master Introduced

The Pressure Master, manufactured by the Pressure Master Company of Homer, N. Y., is a new approach to the problem of closing off the pressure in any line of hose at any determined point on the line. It is the application of hydraulic power to force the compression of fire hose. It has been so designed that a seven year old child can close off a line of 100 pounds pressure in ten seconds, and can so regulate the return of the pressure at the nozzle from a drop to a full volume stream.

"Fire departments" states the manufacturer, "find the Pressure Master an indispensable part of their equipment in replacing or repairing burst hose, lengthening or shortening lines, changing nozzles or pipes, placing Y lines in operation under pressure, reducing 2½-inch lines to 1½-inch and booster lines and relieving pressure on a line to take it up a ladder."

Peerless Hose Clamp

The Kellam Manufacturing Company of Atlanta, Ga., manufacturers of the Peerless Hose Clamp have set forth in a recent statement some of the advantages of hose clamps in modern fire service.

"Every fire that attains second or greater alarm proportions always involves a reorganization, often several of them, and the larger the fire, the greater the problem. First companies usually lay in a single line each and go to work. When the full extent of the fire is realized, the orders are larger streams. Then there is a mad rush to unscramble the lines already laid to shut them down and cut them into larger stream equipment.

"The Peerless Hose Clamp has made the old method of chasing obsolete. The Peerless makes possible the saving of time, men and energy, simplifying the heretofore perplexing fire fighting operation and shortening the time needed to get an effective fire stream in operation.

"The Peerless is simple in construction, easy to carry, foolproof in operation and an essential device in the equipment of the modern fire department."

Harry E. Smith Elected to Rubber Assn. Board

Harry E. Smith, General Manager of The Manhattan Rubber Manufacturing Division of Raybestos-Manhattan, Inc., was elected a member of the Board of Directors of the Rubber Manufacturers Association, Inc., at a meeting of the Board on January 20. Mr. Smith replaces Mr. F. L. Curtis, former General Manager of the Manhattan Division, whose resignation from the Board was accepted with reluctance.

Photo by Logansport Morning Press

New Truck for Logansport

The city of Logansport, Ind., has just put this new truck into service. It is a 75-foot American-LaFrance aerial ladder truck.

★ ★

AN **ALL-OUT** PROTECTION

and an important piece of equipment for

NATIONAL DEFENSE

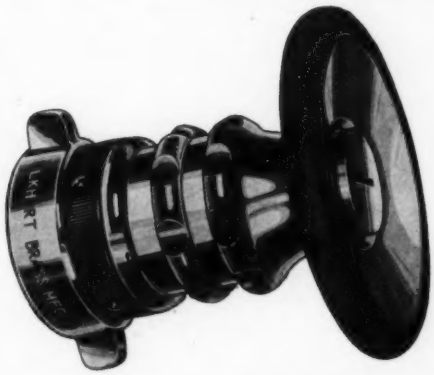
★ ★

The

MYSTERY

ALL PURPOSE NOZZLE

SOLID STREAM ★ FOG ★ WATER CURTAIN



Fire fighting experience in England during the present war has proved conclusively that the fog type nozzle is best suited for all-round purposes.

There is hardly any kind of fire that the MYSTERY can't lick . . . inflammable liquid fires — attic fires or cellar fires.

In one nozzle MYSTERY gives you fog, solid stream, water curtain and shut-off — these changes are easily and quickly made with a twist of the wrist.

Send for illustrated literature and prices.

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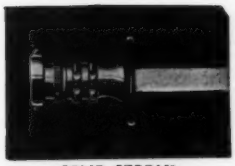
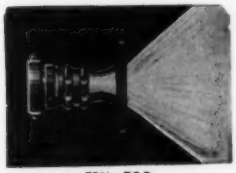
THOUSANDS IN SERVICE IN ALL PARTS OF THE COUNTRY

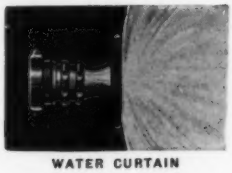
★



SOLID STREAM



75% FOG



WATER CURTAIN

ELKHART BRASS MANUFACTURING CO.

ELKHART *Manufacturers of Quality Fire Department Brass Goods Since 1902* INDIANA

Indian Fire Pumps Guard Liberty Bell

The country's most treasured symbol of liberty, the Liberty Bell, in Independence Hall, Philadelphia, is protected against incendiary bombs by Indian fire pumps, manufactured by D. B. Smith & Company, Utica, N. Y.

Using clear water only, official tests show that Indian fire pumps equipped with the bomb nozzle throw a long distance spray effective in cooling the

Indian Pumps at Independence Hall

Uniformed attendants equipped with Indian Fire Pumps form a protective guard around the famous Liberty Bell.

bomb and wetting down surrounding area preventing spread of the fire.

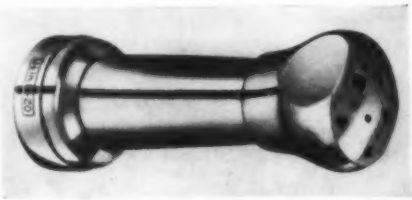
One man can operate an Indian pump. The leak-proof tank of the Indian holds five gallons of water. Air conditioning feature prevents dampness seeping through to carrier's back.

Dupor Double Filter Respirators

H. S. Cover, of South Bend, Ind., manufacturer of Dupor Double Filter Respirators has recently issued an attractive illustrated circular on these products, and also a price list. Copies may be secured by writing H. S. Cover, Station A, South Bend, Ind.

Waterfog Nozzle

The illustrations of the new Type N-30 Waterfog nozzle recently developed by the Rockwood Sprinkler Company of Worcester, Mass., arrived

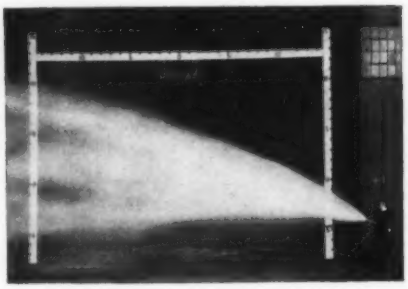


Waterfog Nozzle

too late to appear with the item in the February issue of FIRE ENGINEERING. They are included herewith.

This nozzle can be used in extinguishing incendiary bombs. While it will not extinguish the fire, it safely accelerates its burning, and in the meantime wets down and cools the surrounding area.

Among its other uses are the extin-

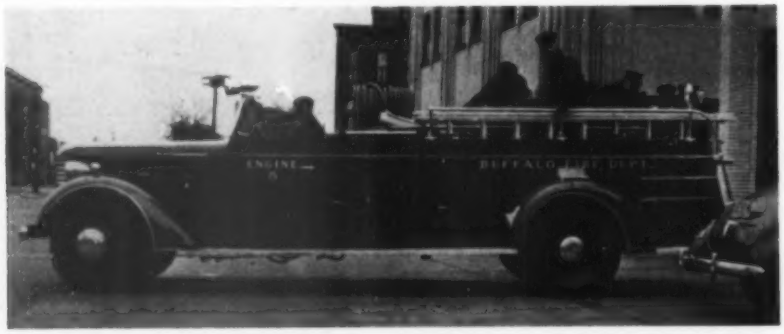


The Waterfog Nozzle in Operation

guishing of fire in flammable liquids and in electrical equipment.

Catalogue Received

Catalogue 2100 illustrating and describing a complete line of floodlight projectors, from 10 and 12 inch short range types to the 36-inch heavy duty projector utilizing a 5,000 watt lamp, has been re-issued by the Pyle-National Company, 233 North Michigan Avenue, Chicago, Ill.



New Pumper for Buffalo Fire Department

One of the new 1,000 gallon fire engines recently delivered to the Buffalo Fire Department by the Buffalo Fire Appliance Corporation. It is a two-stage pump powered by a 225 horse power Hercules engine.

New York Buys Air Raid Sirens

Contracts for 400 air raid sirens were let recently by the civilian defense procurement division of the Department of Purchase, New York City.

The sirens will be delivered at the rate of seventy-five a week. The total cost will be $67,260, exclusive of installation charges.

Contracts also were let for installation of eighteen more of the seventy sirens which the city has had on hand since shortly after the false air raid alarms of last December. When these are installed they will bring to thirty-seven the number ready for action, contracts previously having been given for the installation of twenty-one others.

The latest orders for new sirens went to three companies: the H. O. R. Siren Company, 6 Broad Street, Stapleton, S. I. The Sparks-Withington Company, of Jackson, Mich., and the Federal Electric Company, Inc., of Chicago.

Air Raid Warnings Defined

In order to prevent misunderstandings regarding blackouts and air raid warnings and the relation between them, the Protection Division of the U. S. Office of Civilian Defense recently released the following definitions:

"A blackout is a precautionary darkening of lights which might aid hostile aircraft in locating particular tagets. Under a blackout it is expected that all normal activities will continue except those which mean showing lights. A blackout does not necessarily mean that there are enemy aircraft in the vicinity. Blackouts are precautionary measures.

"On the other hand, an air raid warning means there are hostile or unidentified planes close by. It means that normal activities must be modified to get people under shelter and preparations made for casualties and other damages as a result of the dropping of bombs, should that take place, within a few minutes. Air raid warnings are protective. All air raid warnings at night include blacking out, of course; they likewise include the alerting of the various elements of the Citizens' Defense Corps.

"Thus, all air raid warnings are also blackouts, but it does not follow that all blackouts are also air raid warnings."

Air Raid Alarm Signals to Be Uniform

State authorities in the Second Region, which includes the states of New York, Delaware and New Jersey, have agreed to adopt the uniform method of sounding air raid alarm signals, originally suggested by the Office of Civilian Defense, and already in operation in the First Region.

It is expected that the Third Region will immediately make efforts to get a similar adoption of the uniform signal and that each of the remaining six regions would similarly go ahead.

The uniform signal given by air horns or whistles consists of short blasts, given by sirens consists of fluctuating note of two-minutes duration at varying intervals between signals to conform with mechanical limitations of the instrument. The all-clear signal consists of a long, continuous blast or a note given at a steady pitch.

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ACME ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

GOES ALL OUT FOR NATIONAL DEFENSE

Acme No. 4 Gas Mask Worn with Front Carrier

Acme Gas Masks meet the exacting needs of Fire Service, the Fire Protection Industry, and Civil Defense. Fire Defense is National Defense when that Defense means protection for industries manufacturing war and other important materials. Every industry is vital toward National Defense, and should be thoroughly equipped with tested and proven Acme Gas Masks.

Pictured on the left and right are the Acme Military Gas Masks with front and side carriers.

The Military Gas Mask provides protection against all known military gases, toxic smokes and fumes.

The Acme All Purpose Gas Mask can be supplied with military type canvas carrier for front or side wear.

The All Purpose Gas Mask protects against all known industrial and military gases, toxic smokes, CARBON MONOXIDE, and smoke suffocation.

Acme Design, Materials and Workmanship provide the utmost in Gas Masks.

Acme No. 4-A Gas Mask Worn with Side Carrier

Pictured above is the Acme No. 9 Civilian Gas Mask with Canister which protects against all known military gases, toxic smokes and fumes. It is constructed to fit all normal faces—note comparison above.

On the right is pictured the No. 5 Gas Mask with No. 15 military canister—ideal for Air Raid Wardens, Fire Watchers, and Civilian Defense groups. It provides protection against all known military gases and poison smokes.

The Acme Doughboy type Helmet is made of alloy steel and weighs only 1¾ lbs. The headband is cushioned and can be quickly adjusted to head size, with adjustable leather chin strap. The Helmet will deflect shrapnel, bomb splinters and other dropping fragments. Standard Doughboy Helmet dimensions.

Acme No. 4 All Purpose Type FD Gas Mask now Universally Popular in Fire Departments Throughout the World. Protects Against ALL Gases and ALL Poison Smokes

Acme No. 5 Military Gas Mask and Military Alloy Steel Helmet Used Extensively by Fire Watchers, Air Raid Wardens, Civilian Defense Groups and Workers Wherever Protection Equipment May Be Advisable

Write TODAY for Prices and Descriptive Literature on Above

ACME PROTECTION EQUIPMENT COMPANY, INC.

Manufacturers

3616 LIBERTY AVENUE Cable Address: ACMEPROCO PITTSBURGH, PA., U.S.A.

New Bungalow Station for Topeka

On May 16, 1933, Chief William J. Cawker became head of the Topeka Fire Department. From that time to the present, Topeka has rebuilt four of its fire stations into new bungalow-type fire houses.

For the past several years the Department has been endeavoring to secure a new station building in which to house No. 1 Engine Company. In making up the budget for the year 1934, Chief Cawker recommended that the old building be sold and the proceeds used for purchase of another site and the erection of a new building. The floor space of the old building was far in excess of that required for the fire apparatus and necessary accommodations for a four-man company, and required an unwarranted and wasteful amount of fuel in order to maintain a comfortable temperature during the winter months. Because of the traffic congestion at that station, it was deemed advisable that should a new building be built that it be located at some other place.

The total cost of this new fire station complete is set out as follows:

Building site		$1,500.00
Architects fees and supervision		645.53
Bowers Construction Company		11,496.53
Street Department paving		175.77
Material from old city building:		
35,000 brick @ 3.50	$122.50	
640 cu. ft. rock @ 5c	32.00	
6,483 ft. lumber @ 3c	194.49	348.99
Cleaning brick, 3 men, 33,434 bricks		80.15
Abstracts and recording fees		33.40
Advertising for bids		23.62
Gas tank and pump		65.45
Additional radiation in truck room		15.00
Closet combination		27.00
Electrical fixtures		60.00
Total		$14,613.54

Topeka's New No. 1 Fire Station

On June 25, 1940, after bids had been advertised for, the Board of Commissioners accepted the offer of the Safeway Stores, Inc. of Kansas City, Mo., of $13,200 for the site upon which the old station was located.

On June 28, 1940, the bid of Roy Gilbert and Bert Sisco Company of $125.00 for the building was accepted, the building to be razed and cleared from the site.

On June 28, 1940, the Board of Commissioners authorized the purchase of Lots Nos. 96-98-100 on Quincy Street for $1,500 from Golden Rule Lodge No. 90, A. F. & A. M. The size of the lots was 225 by 170 feet, large enough for a bungalow fire station and a drill tower.

On August 8, 1940, the bid of the Bowers Construction Company in the amount of $9,813.00 was accepted and the contract awarded for the erection of a fire station in accordance with the plans and specifications of Cuthbert and Swehrk, Architects, the building to be 45 by 47 feet, one story, brick and concrete, with asbestos shingle roof.

On October 29, 1940, the bid was accepted from the Bowers Construction Company and an additional sum of $1,683.53 was allowed, covering items not included in the original contract.

Ceiling fixtures from the old city building were installed in this building, approximate value of which was $117.00. The battery charger from the old station was likewise installed, value of which is $50.00.

Some new furniture was also purchased for the station, including a new breakfast set at $14.15, a library table at $29.75, Detroit Jewel Range at $50.00, an air compressor at $99.50, a vise at $6.00, Murphy Recessed Bed at $32.00. Total cost of new furniture was $231.40, making a total cost of $14,844.94 for the new station.

The cost of this improvement was covered by proceeds from the sale of the old No. 1 Station site and building, and from the Fire Department budget as follows:

Sale of site, $13,200.00 less escrow fee of $10.00 and revenue stamps at $14.85	$13,175.15
Sale of old building	125.00
From Fire Department budget	475.00
From other sources, Bond Issue	1,069.29
Total cost of improvement	$14,844.94

The company was housed in a temporary location during the months of July, August, September and October, moving into their new quarters on November 1, 1940.

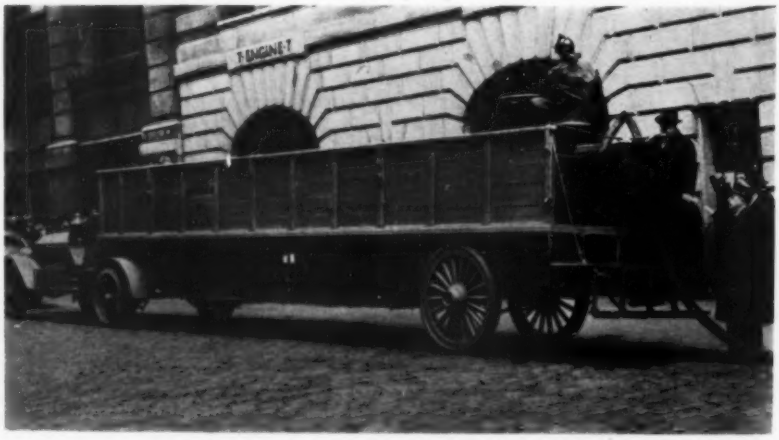
The station faces directly west with an office, sitting room and kitchen on the north. On the south directly opposite the apparatus room is the bedroom and locker room.

Novel Hose Relay Truck for New York

A hose relay wagon converted by the Fire Department from the chassis of an aerial ladder truck, to carry 3,000 feet of 3½-inch hose, was placed in service recently at Engine Company 7, at 100 Duane Street, New York City. Fire Commissioner Patrick J. Walsh and John J. McCarthy, Assistant Chief of the department, turned the wagon, known officially as Hose Relay Apparatus No. 1, over to Deputy Chief Timothy Gurnee, in command of Division 1.

Stretching more than half a mile, the hose could carry water from the East River or the Hudson to an inshore blaze and could by-pass broken street mains for blocks during a bombing raid or other disaster. It also could carry a stream to the upper parts of high buildings if interior standpipe system failed.

The wagon, painted battleship gray, has a rear tiller wheel which must be manned by a tillerman.



The New York Fire Department Has Placed in Service a Truck Which Carries 3,000 Feet of 3½-Inch Hose. The Unit Was Converted from an Aerial Ladder Truck, from Which All Ladders and Racks Were Removed

RUSSIAN AUXILIARY FIREMEN WELL ORGANIZED AND ABLE

Preparation Started Well Before European War Got Under Way; Force Numbers Millions

WHILE profiting by the experience which the English gained in fighting German incendiary bombs, the Russians also had preparation for this form of attack through the activities of a special organization, Ossoviakhim, which had

A Fire Fight Squad of a Moscow Apartment House Which Extinguished Over 50 Incendiary Bombs Dropped by Axis Fliers

been drilling civilians for years in air raid and chemical warfare defense. Millions of men and women had been enrolled, and trained, in Ossoviakhim groups all over the country.

Prepared Prior to Attack

As soon as the Nazi attack began, every civilian sprang to his place in the fire-fighting defense network. Every building had its fire-fighters and its air-raid wardens. Inhabited buildings had regular shifts which posted several persons on each roof. At some place close under this roof, as well as on top of it, was a sand pile; and inside the house a bucket of sand and a shovel, now so familiar in England, were to be found in a conspicuous and convenient place.

Reservoirs of water were built in the courtyards of apartment houses, and on the outskirts of the city old wells were reopened. Fire hose was regularly tested, and there were drills in handling it, before the days when air raids began and it was no longer a matter of practice. Chemical fire apparatus has also been distributed throughout the city in the hands of special squads, while for most of the able-bodied women, and men not at the front, there have been demonstrations in parks, and elsewhere, in the actual smothering of fire with sand.

Explosive Bombs Used

The Russians have had to deal not only with the type of bombs familiar to London, but with one which burns for a few moments and then explodes, killing or seriously injuring everyone within its radius. There has had to be training in delaying the attack on a fire until it is demonstrated what kind of bomb is at hand.

A Fire Brigade, Medical Squads, Squads Guarding Harvest and Collective Farm Property Have Been Organized by the Collective Farm "Novaya Zhizn" in Moscow Region. A Fire Brigade at the Drills Is Shown Above

Not only in the cities have fire-fighting squads been organized and drilled, but also in the country villages and on collective farms. Here there is the double task of protecting human life and homes, and also the precious crops, farm buildings and farm animals. Watchers are posted not only on the house and barns, but, during harvest, in the fields themselves, and in this way the bumper crop of last year was saved.

Fire-fighters in the Soviet Union, as in England, have become an arm of the defense forces, all the more valuable because they fight with the fierce determination of persons everywhere who battle to save their homes and loved ones.

Automobile Warehouse Makes Hot Fire

A four-alarm fire, which raged through four floors of the James W. McAlister Company automobile warehouse and showrooms at 1200 Van Ness Avenue, San Francisco, on January 29, cost the life of a Fire Department lieutenant, injured 12 other firemen and did damage to the building and 300 new and used autos.

Lieut. Charles McCarthy, 43, attached to Engine 15 and a veteran of 15 years in the department was the man killed. Fellow firemen dragged him from the flaming second story where he had been overcome by smoke and fumes from burning paint.

A passerby discovered the fire and pulled Box 3161 at Post Street and Van Ness at 10:27. A second alarm was struck at 10:32, the third at 10:40 and the fourth at 10:50 p.m. Special calls were transmitted for a rescue squad and two water towers.

Fire Marshal Frank Kelly said the fire apparently started in the second-floor paint shop, but, because it traveled "suspiciously fast," listed it as of "undetermined origin."

Fire Chief Charles Brennan, who took personal charge of the operation, estimated damage at $50,000.

Van Ness Avenue is the widest street in the city and it was along this street that firemen and soldiers dynamited a firebreak during holocaust of 1906, thus saving what is known as the Western Addition section of the city.

BOB GREENOCK

Inn Destroyed

On the night of January 14, a fire of undetermined origin destroyed the Ye Old Brooklyn Inn in Brooklyn, Conn., with a loss of $25,000.

The fire was discovered by the proprietor, George Nelson, who was working in the inn at the time. When the lights went out, he went to investigate in the cellar, but could get no further than the stairs because of the ascending flames.

He went from there to the second floor where he was overcome by smoke, and had to be brought down a ladder. He was revived by an inhalator used by State Officer Johnson of the Connecticut State Police.

Flames gained very rapid headway in the century-old inn. Firemen from Brooklyn, Danielson and Wauregan responded immediately, but lack of water and the progress of the fire made it impossible to save the inn. Lines of hose were laid from a nearby well but it was soon pumped dry by the pumper of the Danielson Department.

Barns and sheds at the rear of the inn were saved by the efficient work of the firemen and favorable wind conditions.

GEORGE ROBERTSON.

Lawton to Build Two New Stations

Through a recently approved bond issue and Federal aid, Lawton, Okla., proposes building two new fire houses at a cost of $52,000, improving the filter plant and laying additional water mains at a cost of $205,900.

★ STERLING ★

GENERAL ALARMS

Model "M"

The Sterling Model "M" Siren gives the Volunteer Fire Department a siren containing every important feature a fire signal should have. The powerful and distinctive tone—the 100% weatherproof protection guaranteeing 24 hours of service, in all kinds of weather as well as many other features are the results of over 30 years experience built into every Sterling Siren, and there are so many thousands of them in operation in Volunteer Fire Departments all over the country that they have become a universal fire alarm. Sterling value is known to every fireman and no siren, size for size, or of equal value can be sold for less than a Sterling.

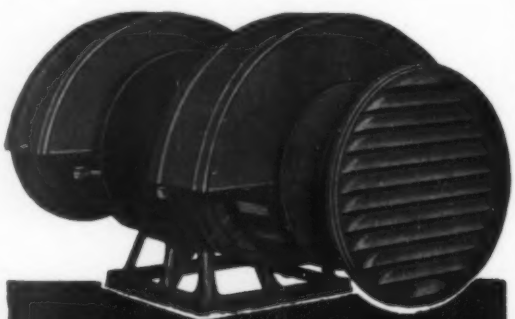
Made in two sizes and operating either from Hand-Switch-Remote Control or Pull Lever Boxes, these sirens cover every range of fire department, and Sterling Engineers will gladly recommend the proper size for your community.

★

"AIR RAID"

These alarms, with their penetrating and compelling tone, which primarily were built for fire alarm service are particularly well adapted for the emergency duties attendant on National Defense, such as air raid alarms.

★



STERLING MODEL "M"

GENERAL ALARM SIREN

You Can Depend On It *ALWAYS*

STERLING SIREN FIRE ALARM CO., INC.

55 ALLEN STREET ★ ROCHESTER, N. Y.

DANDUX SALVAGE COVERS

Prevent Excessive Loss from Water Damage

In these days of America's supreme effort of self-defense, we pause to renew our pledge of leadership in the design, use of quality material and precision craftsmanship—for all industries, using DANDUX CANVAS PRODUCTS.

Write or phone nearest office for further information.

C. R. DANIELS, INC.

101 CROSBY STREET, NEW YORK, N. Y.

NEWARK BOSTON CHICAGO CLEVELAND

DETROIT PHILADELPHIA PITTSBURGH

I. M. S. A. Meeting

(*Continued from page* 166)

regulation 'phones that would not need a coin to operate. He strongly urged the protection of all systems. Because of priorities it may be difficult to obtain supplies, and lines and equipment should be maintained and protected at all costs. Where PBX systems are exposed they should be protected by grilles at the windows—heavy locks on doors and all entrances should be guarded.

Commenting on the fact that 75% of all alarms for fire come in over the telephone, Mr. Hinkley urged that the public be instructed to use fire alarm boxes whenever possible to relieve the pressure on the 'phone systems which are sure to be overtaxed during air raids, blackouts, etc.

Speaking on "The Fire Alarm in Defense," Percy Charnock, Fire Coordinator of Massachusetts, suggested that "you dust off the alarm system"; pointing out that some systems are good, some fair and others poor. After studying effects of bombings elsewhere, he concludes that overhead wires are less apt to be destroyed than conduits buried in the ground, and are much more easily repaired. Appreciating the difficulty of getting materials for new systems, Mr. Charnock said he thought that it would be possible to obtain enough wire for ordinary repairs and maintenance and he implored the signal men to make constant and thorough inspections of switchboards, batteries, lines and especially boxes. "The elimination of 'grounds' is most important," he declared, and suggested that, "tests be made under wet and unfavorable conditions rather than on cold dry days."

He also urged that a minute inspection of all wires be undertaken immediately, the cutting away of interfering branches and the taking up of slack, and the replacement of bad wires. All boxes should be painted if they have not already been, and a band should be added to the pole to make the fire box more easily seen. Many different ideas about marking boxes with luminous paint and other methods were discussed and Mr. O'Bannion reported that experiments are being carried out with a view to the use of a new kind of luminous paint which would cause the box to glow during a blackout. Mr. Charnock stressed the necessity for a city map showing the location of alarm boxes and suggested that duplicate maps be struck off and placed in the hands of all air raid wardens and also posted in every public building. "We must educate the public in regard to fire alarm boxes" he said." Many citizens have never sent in an alarm and most of them don't know how to do it."

The installation of auxiliary systems for industrial plants was offered as one means of combatting sabotage, and where systems are dependent upon local power, some supplementary means of power should be ready in case the local power systems are put out of commission. He stated with great emphasis that no fire alarm system should be left unguarded for a moment; and when asked "if the army would do the guarding"? said, "We may come to that; it is being done in some places now."

"The fire alarm headquarters must be kept intact. If headquarters should

be lost there must be some method of setting up a single line, or a series of lines between stations for the handling of signals and information. Here in greater Boston" he added "we have the advantage of inter-communication between several suburbs and cities and this will prove of great value should the telephone lines be overtaxed or put out of commission."

Mr. Charnock complimented the signal members on their record of performance in past years, especially during the Hurricane of 1938, and said he knew they would do all in their power to maintain the efficiency of their individual municipal signal systems.

A paper dealing with the utilization of Municipal Signal Systems as Additional Channels in case of Emergency was read by Mr. E. J. McCarthy of the Gamewell Company.

The last speaker of the afternoon session was Mr. Edgar F. Copel, a fellow member of the I.M.S.A., who held the attention of the large gathering with a most timely topic on the Restrictions of Traffic Lights During Blackouts.

On Thursday Jan. 29th the business session was convened at 9:30 and a report of the Short Wave Committee, appointed at the Providence meeting, was made. Different methods of utilizing the manpower and equipment of short wave radio was thoroughly discussed by Mr. Lewis S. Boss of Warwick, R. I.

The two day convention adjourned Thursday afternoon and the members were of the unanimous opinion that much had been learned from the excellent papers and discussions. Officers of the New England Section of the I.M.S.A. are as follows: R. J. White, President; H. T. Smith, First Vice President; R. E. Neal, Second Vice President, and O. F. Hawley, Secretary-Treasurer.

Chattanooga to Purchase New Equipment

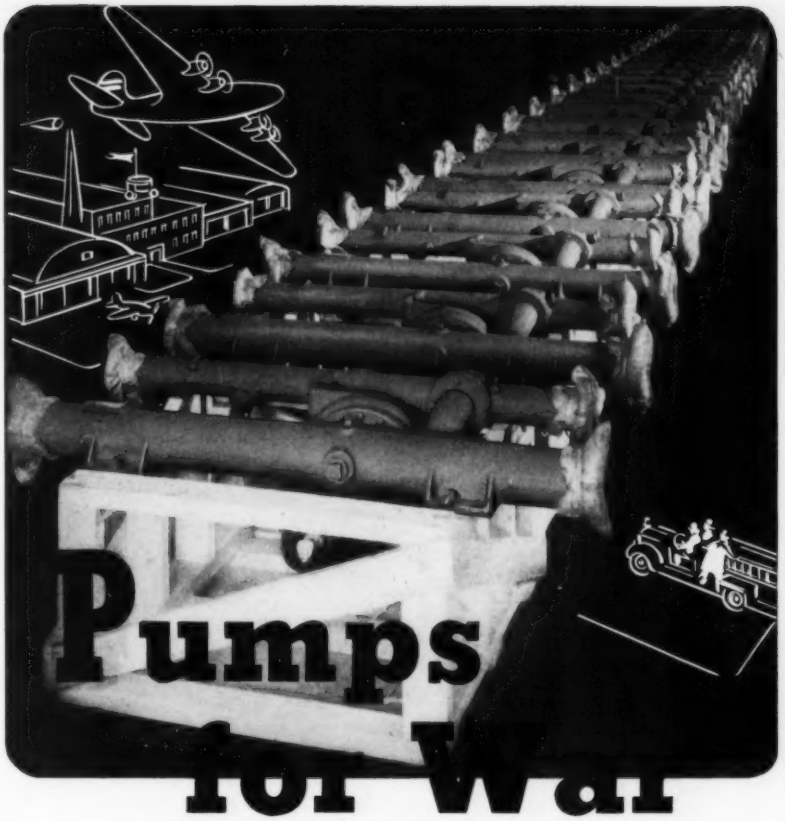
As a Defense Public Works project the city of Chattanooga, Tenn., plans to purchase fire fighting equipment consisting of four 1,000-gallon pumping engines, four 750-gallon pumping engines, one 750-gallon combination ladder truck and a portable floodlight unit. The improvements will cost $50,000, of which a grant of $25,000 has been given by the federal government. The city will make up the difference.

Existing equipment is not adequate to meet demands placed upon it due to increase in population. This increase is caused by defense activities at Fort Oglethorpe and the U. S. Army Ordnance plant.

Butenschoen Made First Deputy Fire Commissioner

Fire Commissioner Patrick Walsh of the New York Fire Department has appointed Deputy Chief Ferdinand Butenschoen of the 12th Division, Brooklyn, as First Deputy Fire Commissioner, succeeding Hugh A. Halligan.

Chief Butenschoen was appointed to the Fire Department on May 6, 1905, and was promoted to lieutenant in 1912, captain in 1913, battalion chief in 1925 and deputy chief on October 10, 1929.



Waterous Fire pumps in large numbers are protecting army and navy cantonments, airplane hangars, airplane factories, munition plants and far-flung outposts. These dependable Pumps are doing a big job in defense against one of modern warfare's most dreaded weapons — FIRE.

Waterous Dependable Est. 1886

WATEROUS COMPANY • ST. PAUL, MINNESOTA

WATEROUS

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FIRE PUMPS

TRADE MARK
GAMEWELL
REG. U.S. PAT. OFF.

Manufacturers of

EMERGENCY SIGNALING SYSTEMS

- Fire Alarm
- Police Signaling
- Air Raid Warning
- Industrial Fire Alarm
- Fire and Watchmen's Supervisory
- Automatic Fire Detection

Two thousand municipalities, several thousand industrial plants and many of the largest institutions now use Gamewell Systems for the protection of life and property and to ensure the permanency of established business.

We freely cooperate in planning protective Signaling Systems.

THE GAMEWELL COMPANY

Specialists in Public Safety

NEWTON UPPER FALLS MASSACHUSETTS

Handy *Portable*

BATTERY BOOSTER with BUILT-IN TEST-METER and AUTOMATIC TIME SWITCH

HANDY Battery Booster tests batteries in 1 minute — charges them in from 2 to 8 hours without removing battery from car or truck. Equipped with Test Meter which shows condition of battery before and after charging; automatic Time Switch shuts off current when charge is completed, and prevents overcharging. Charges either 6-volt or 12-volt batteries. Guaranteed 2 years.
PRICE, complete, including bulbs, clips, time switch, test meter, cord and plug..... **$89.50**
(Specify 115-volt or 230-volt when ordering.)

ASK FOR BULLETIN 88 on HANDY BATTERY BOOSTER and Bulletin 308 on HANDY 6-AMP CHARGER F-1, $14.00, less bulb.

BALDOR ELECTRIC COMPANY
4390 Duncan Avenue ST. LOUIS, MO.

Preparing Auxiliaries for Service

(*Continued from page* 151)

extinguisher is used on. Instructions on charging and re-filling extinguishers. Foamite, smoke ejector, layout of same, give description of make-up operations.

Fourth night—Instructions on the care of hose in quarters and at fires. Instructions on changing hose on hose wagon, one side at a time, wagon to stay in service. Instructions on ¾-inch and 1½-inch hose.

Fifth night—Instructions on laying lines of hose at fires. Hose to be connected to pump, and stretched out on main floor. Instructions on the operation of play pipes at fires. The use of hose belts, spanners, and hose lines.

Sixth nigth—Instructions on the operation of booster pump, or chemical tank. Refilling of booster tank, or chemical tank. Cold weather precautions.

Seventh night—Hose connected to pump, and stretched out on main floor. Instructions given on connecting, and operation of Bresnan nozzle, cellar pipes, deck gun, deluge set, Copper hose jacket, and Morse gate.

Eighth night—Instructions on connecting pump to hydrants: Lowery, Post. The use of soft and hard suction. Instructions on connecting lines of hose to high pressure hydrants. Care of hydrants in winter.

Ninth night—Instructions on operating pump, discharge gates, bleeder cocks, pump drain, churn valve, relief valve, pump gauge, auxiliary motor cooling system, lubricator, gear shift lock. Instructions on the Ross thawing device.

Tenth night—Instructions on carrying hose up stairways, ladders, fire escapes, making hose up. Instructions on hauling hose, and ladder to roof of building.

Eleventh night—Instructions on ventilation, opening doors, windows, skylights, breaking glass.

Twelfth night.—Instructions to be given for the safety of men when working at fires. Handling lines. Opening and closing nozzle. Working from ladders, fire escapes, roofs, stairways, etc.

Thirteenth night—Instructions on various lights carried and used in this department. Instructions on gas masks and inhalator.

Fourteenth night—Instructions on raising and lowering an aerial ladder. Instructions on various types of ladders carried on a ladder company. Instructions on dogging ladders to roofs of buildings and fire escapes.

Fifteenth night—Instructions on tools and appliances, life nets, life lines. Instructions on tying knots.

Classes in first aid are given two hours an evening for ten evenings. Instructions are given by officers of the department who have been designated as instructors by the American Red Cross.

Minnesota Volunteers Protected

Volunteer firemen serving with or without pay during the war emergency will come under the Minnesota compensation insurance act, Edward J. Devitt, assistant attorney general, has ruled in answer to a request from a village attorney. This will affect scores of Minnesota towns and villages which carry compensation coverage on their firemen.

Convention Dates

April—FLORIDA STATE FIREMEN'S ASSOCIATION. Annual meeting. Miami, Fla. Secretary, Chief F. C. Pfaender, Chattahoochee, Fla.

May—IOWA FIRE CHIEFS' ASSOCIATION. 13th annual meeting. Ames, Ia. Secretary, Chief L. R. Morris, Ames, Ia.

May—NEVADA STATE FIREMEN'S ASSOCIATION. Annual meeting. Sparks, Nev. Secretary, E. R. Simms, Sparks, Nev.

May 6-8—GEORGIA STATE FIRE COLLEGE. Annual meeting. Atlanta, Ga. Director, Harry Phillips, Atlanta, Ga.

May 11-15—NATIONAL FIRE PROTECTION ASSOCIATION. Annual meeting. Atlantic City, N. J. General Manager, Percy Bugbee, 60 Batterymarch Street, Boston, Mass.

May 18-20—NEW YORK STATE ASSOCIATION OF FIRE CHIEFS. Annual meeting. Schenectady, N. Y. Secretary, Chief Chris W. Noll, Poughkeepsie, N. Y.

June—NORTH DAKOTA FIREMEN'S ASSOCIATION. Annual meeting. Botteneau, N. D. Secretary, H. R. Handtmann, Fargo, N. D.

June—SOUTH CAROLINA STATE FIREMEN'S ASSOCIATION. Annual meeting. Newberry, S. C. Secretary, Chief Paul E. Wilburn, Union, S. C.

June—SOUTHEASTERN ASSOCIATION OF FIRE CHIEFS. Annual meeting. Valdosta, Ga. Secretary, Chief Walter W. Stephen, Monsanta Chemical Company, Anniston, Ala.

June 1-5—SOUTH DAKOTA FIREMEN'S ASSOCIATION AND FIRE SCHOOL. Annual meeting. Watertown, S. D. Secretary, M. C. Sullivan, Parkston, S. D.

June 8-10—MINNESOTA STATE FIRE DEPARTMENT ASSOCIATION. Annual meeting. Shakopee, Minn. Secretary, Fred Pfaender, New Ulm, Minn.

June 8-10—NEW MEXICO STATE FIREMEN'S ASSOCIATION. 13th Annual Fire School and 20th Annual Convention. Las Vegas, N. M. Secretary, T. A. Rosenwald, Albuquerque, N. M.

June 16-19—ILLINOIS FIRE COLLEGE. 18th annual meeting. Univ. of Illinois, Champaign-Urbana, Ill. Secretary, Chief Roy W. Alsip, Champaign, Ill.

June 17-20—ARIZONA STATE FIREMEN'S ASSOCIATION. Annual meeting. Prescott, Ariz. Secretary, H. W. Reggin, Prescott, Ariz.

June 22-25—COLORADO STATE FIREMEN'S ASSOCIATION. Annual meeting. Durango, Col. Secretary, G. Turnbull, 215 Boston Bldg., Denver, Colo.

June 23-25—NEW ENGLAND ASSOCIATION OF FIRE CHIEFS. 20th Annual Convention. Rutland, Vt. Secretary, Chief J. W. O'Hearn, Watertown, Mass.

June 25-27—EASTERN ASSOCIATION OF FIRE CHIEFS. Annual meeting. Reading, Pa. Secretary, Chief Charles E. Clark, Box 217, Wayne, Pa.

June 25-27—HUDSON VALLEY VOLUNTEER FIREMEN'S ASSOCIATION. Annual meeting. Mechanicsville, N. Y. Secretary, Chief Chris W. Noll, Poughkeepsie, N. Y.

July 1—TEMISKAMING FIREMEN'S ASSOCIATION. Annual tournament. New Liskeard, Ont. Secretary, F. E. Thompson, Box 686, New Liskeard, Ont.

July 15-17—MARITIME FIRE CHIEFS ASSOCIATION. Annual meeting. Kentville, N. S. Secretary, Charles A. Cunningham, St. John, N. B.

August—CONNECTICUT STATE FIREMEN'S ASSOCIATION. Meeting place to be decided upon. Secretary, D. W. Harford, South Norwalk, Conn.

Aug. 11-14—VIRGINIA STATE FIREMEN'S ASSOCIATION AND AUXILIARY. Annual meeting. Luray, Va. Secretary, R. B. Barker, Box 893, Newport News, Va.

Aug. 14-15—VERMONT STATE FIREMEN'S ASSOCIATION. Annual meeting. Middlebury, Vt. Secretary, W. H. Adams, Vergennes, Vt.

Aug. 18-19 — FIREMEN'S ASSOCIATION, STATE OF NEW YORK. Annual meeting. Syracuse, N. Y. Fred A. Davis, Fort Edward, N. Y.

September—NEW HAMPSHIRE STATE FIREMEN'S ASSOCIATION. Annual meeting. Meeting place to be decided upon. Secretary, Aubrey G. Robinson, Manchester, N. H.

Sept. 15-16—IOWA FIREMEN'S ASSOCIATION. Annual meeting. Tipton, Ia. Secretary, H. C. Reinholdt, Manning, Ia.

In peacetime, Homelite Portable Generators proved their value to fire departments in many thousand emergencies—fires, floods, hurricanes, accidents, riots, power failures and many others. Rushed to scenes of trouble, these light-weight portable units provided electric power to operate floodlights, emergency communication systems, electric tools, and lighting systems in hospitals, public buildings and airports. They saved lives. They saved property. They prevented serious accidents.

Now, in war time, these units are even more valuable to your community. They are a vital part of civilian defense. They stand ready to supply emergency power, the instant there's a call.

Keep 'em Burning Brighter and Longer

- Keep your Homelites in good condition.
- Mix ½ pt. of No. 30 oil with each gallon of gasoline used.
- Don't use the choke for a throttle.
- Keep spark plugs in good condition.
- Keep the carburetor set on the lean side.
- Keep engine free of carbon.

SEND FOR THIS BOOK—*A Homelite is rugged—but with all good machines a little care saves a lot of wear. Send for this operating instruction manual that shows how to keep Homelites running longer and better.*

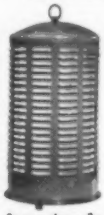
HOMELITE CORPORATION

803 Riverdale Ave., Port Chester, New York

SIRENS BY SPARTON

AIR RAID—FIRE! EMERGENCY!

A LINE of sirens, horns and emergency signals famous for more than forty years for precision manufacture.



MODELS 37, 38 and 39—A series of big, rugged, high powered, non-directional electrical sirens that have a penetrating siren howl which carries for 2 to 5 miles. Particularly suitable for large areas such as municipalities, airports, government properties, industrial or defense plants, universities and public utilities.

Strong, serviceable, precision-built; comparable to units costing considerably more.

Base has three lugs for installation on roof. Base threaded for standard 2½" pipe for high altitude mountings; guy wires can be attached to lugs. Made in three sizes with universal motor operating on 50 to 60 cycle AC single phase or DC current. Equipped with screens to keep out bugs and birds. Constructed to withstand all weather conditions.

Volt	Height	Diam.	H. P.	R.P.M. Approx.	Weight
Model 37—110-120 AC-DC	25¼"	14"	1	7600	82 lbs.
Model 38—110-120 AC-DC	30¼"	14"	2	6800	93 lbs.
Model 39—220-230 Single Phase AC	30¼"	14"	3	5700	105 lbs.

MODEL 35

A directional siren for small communities, railroad yards, docks, warehouses, car barns, business buildings, apartments, industrial plants, local fire stations. Equipped with screens to keep out bugs and birds. A practical, rugged alarm for protection against intruders, sabotage and all civil, military and industrial emergencies; weatherproof. Operates on 110 volts, 60 cycles AC. Ht., 9½"; length, 14"; wt., 15¾ lbs.

MODEL 36

Equipped with flare for efficient projection of tone. For motor cars, trucks, ambulances, fire and police cars, motorcycles, boats. Endorsed by law enforcement authorities, air wardens, marine patrols. Directional. 9 ft. of cable and push button included for installation in any location. High speed motor. Available in 6 volt, 12 volt, 32 volt. Ht., 9"; width, 7"; length, 11"; wt., 11 lbs.; rotor diam., 5½".

MODEL 601

As designed for use on Army Tanks. Ideal for police, fire and emergency cars, ambulances, motorcycles. Rugged, all steel construction; housing and base of heavy drawn steel stampings. Equipped with 6-Port-opening rotor. Directional. Available in 6, 12 and 24 volts DC—R.P.M. 7000 Approximate. Wt., 4¼ lbs.; diam., 4¾"; length overall, 6¾"; ht., inc. base, 5⅞".

THE SPARKS-WITHINGTON COMPANY
Jackson, Michigan—1900-1942

WRITE FOR BOOKLET 590-S for further information

EDDY
Fire Hydrants

Are given preference by so many fire protection and water works men because they know that more than half a century of experience goes into their manufacture and they embody valuable and exclusive features.

Write for the FACTS.

EDDY VALVE CO., Waterford, N.Y.

Sept. 18-19—NEW JERSEY STATE FIREMEN'S ASSOCIATION. Annual meeting. Meeting place to be decided upon. Secretary, Evan F. Benners, Room 602, 24 Branford Place, Newark, N. J.

Sept. 21-22—TEMISKAMING FIREMEN'S ASSOCIATION. Annual meeting. New Liskeard, Ont. Secretary, F. E. Thompson, Box 686, New Liskeard, Ont.

Sept. 21-24—CALIFORNIA STATE FIREMEN'S ASSOCIATION. Annual meeting. Fresno, Cal. Secretary, Harry E. Strasser, 2046 Oregon Avenue, Long Beach, Cal.

October — ARKANSAS STATE FIREMEN'S ASSOCIATION. Annual meeting. Fayetteville, Ark. Secretary, H. D. Compton, Central Fire Station, Little Rock, Ark.

Oct. 5-8—INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION, INC. 47th annual meeting. Atlantic City, N. J. Secretary, Irvin Shulsinger, 8 East 41st St., New York.

Oct. 6-8—FIREMEN'S ASSOCIATION OF THE STATE OF PENNSYLVANIA. Annual meeting. Allentown, Pa. Secretary, Charles E. Clark, Wayne, Pa.

Oct. 13-15—ILLINOIS FIREMEN'S ASSOCIATION. 55th annual meeting. Springfield, Ill. Secretary, Chief Roy W. Alsip, Champaign, Ill.

A Letter on Priorities and an Answer

Below is reproduced a letter sent to the Fire Equipment Section, Division of Industry Operation, War Production Board, by the Editor, and an answer thereto from the W. P. B. They speak for themselves:

"Mr. George W. Angell, Chief, Fire Equipment Section, War Production Board, Social Security Building, Washington, D. C.

"Dear Mr. Angell: So much uncertainty exists among fire departments, and many manufacturers of fire appliances and equipment, relative to priorities, and so many are constantly coming to us for information on this subject, we need your advice!

"We have framed below five questions which, if they can be answered by your office, would go far toward solving many of the questions which are rising.

"Here are questions:

"1. Can cities of over 10,000 population and having no defense industries purchase motor fire apparatus?

"If so, what priority rating are they given for motor fire apparatus?

"2. Can cities of under 10,000 population and having no defense industries purchase motor fire apparatus?

"If so, what priority rating are they given for motor fire apparatus?

"3. Can cities of over 10,000 population and having no defense industries purchase fire fighting tools, such as nozzles, axes, door openers, life nets, etc.?

"If so, what priority rating are they given for the purchase of these?

"4. Can cities under 10,000 population and having no defense industries purchase fire fighting tools, such as nozzles, axes, door openers, life nets, etc.?

"If so, what priority rating are they given?

"5. What precise procedure should be allowed by an eligible city (or fire department) to secure priorities authority for purchase of apparatus or equipment listed above?

"We shall appreciate your early answer.

"Cordially yours,
"FRED SHEPPERD, Editorial Director"

"Mr. Fred Shepperd, Editorial Director, FIRE ENGINEERING, *24 West 40th Street, New York, N. Y.*

"Dear Mr. Shepperd: The various questions which you asked regarding the

purchase of motorized fire apparatus and other equipment for cities of different sizes cannot be answered without some thought being put upon each individual case. For instance, if a village wanted to purchase a fire truck it would be necessary to send in a PD-1A Form to the Division of Priorities. In the regular processing it would reach the State and Local Governmental Requirements Section where consideration would be given to the individual application. If the need seemed to be great enough a suitable rating would be applied for such purchase.

"You will see therefore that no 'over all' statement can be made in regard to such situation and it is really necessary that each case be given individual thought.

"Trusting this answers your questions and that you will call upon us at any time.

"Very truly yours,
"GEORGE W. ANGELL
'Chief, Fire Equipment Section
"Division of Industry Operations"

Straw Hats Destroyed by Faulty Sprinkler

Where there's smoke, there's fire, is an old axiom.

But the bursting of a sprinkler head doesn't always indicate a sign of fire. Twenty-three hundred cases of new straw hats, with a retail value of $250,000, were destroyed at Norwalk, Conn., on January 10, by water from a faulty sprinkler system in the storage department of the straw hat division of the Hat Corporation of America.

The hats, representing a large portion of the company's 1942 stock, were stored in a four story shed on North Water Street. The shed, owned by the Norwalk company, has been used as a storage shed for finished straw hats for several years.

Shortly after 4 P.M. on January 10, the sprinkler heads suddenly released a torrent of water into the stacked cases of hats. By the time a watchman was able to turn off the system, nearly a quarter of a million dollars worth of smart straws had been ruined.

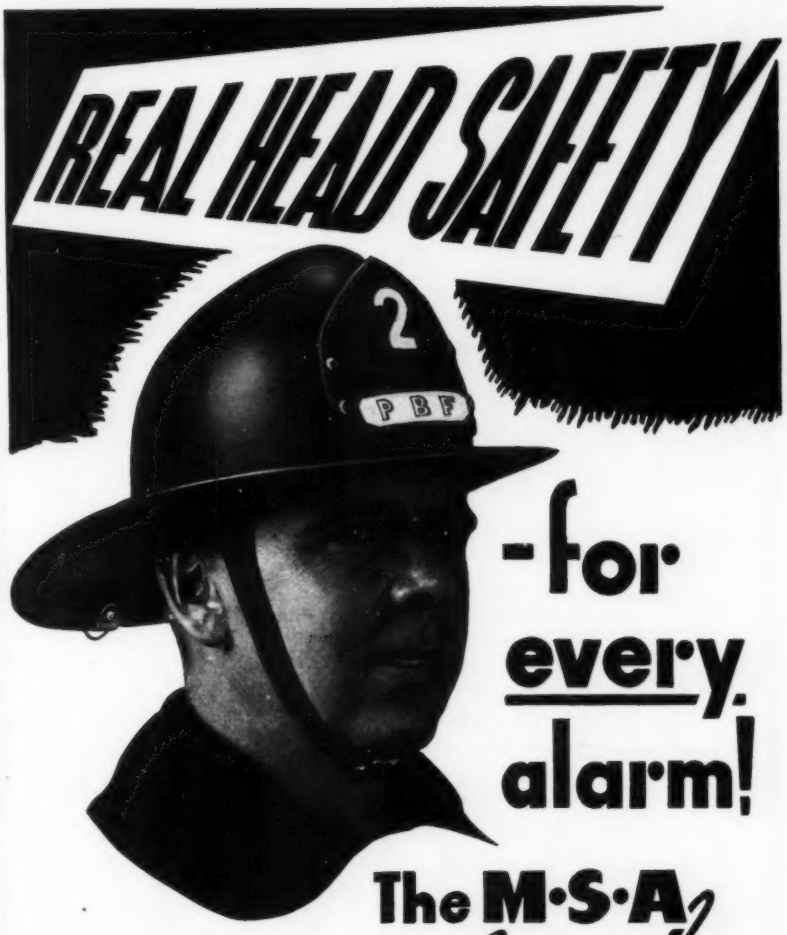
Division foremen estimated that a portion of the straw can be salvaged. They indicated, however, that straw hat workmen who normally complete their output for the summer by the end of February, will be placed on a rush schedule in an effort to replace the loss. The work of replacing the hats will place nearly 250 workmen on a two-shift-a-day schedule and will run well into the month of March.

THOMAS F. MAGNER

Mullaney to Be Chief Fire Marshal

Anthony J. Mullaney, Deputy Chief Fire Marshal of the Chicago, Ill., Fire Department since 1933, is to be promoted to Chief Fire Marshal, second only to Commissioner Michael J. Corrigan in the command of the fire department.

Except for a change of pay and title, his status will change little. For years he has been Commissioner Corrigan's right hand man. As before, he will be at all big fires and in command in the absence of Commissioner Corrigan.



PROVIDING top safety, comfort and durability on normal fire-fighting assignments everywhere, this new and widely-popular M.S.A. Helmet qualifies on every count for the added demands of wartime service. Falling and flying objects, chemicals, live wires—the multiplied hazards of explosion—and incendiary-created fires are countered by strong, non-softening, electricity-proof laminated bakelite construction. *Comfort* on-the-job is assured by light, well-balanced design and special features. For the facts—write for Bulletin No. DX-5, or ask for a demonstration!

MINE SAFETY APPLIANCES COMPANY
BRADDOCK, THOMAS and MEADE STS. . . . PITTSBURGH, PA.
DISTRICT REPRESENTATIVES IN PRINCIPAL CITIES

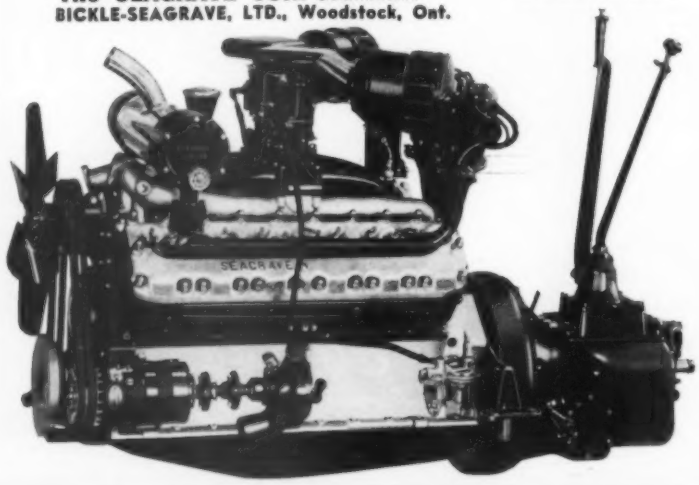
SEAGRAVE V-12

THE ORIGINAL "V" FOR VICTORY

Victory in war and victory in peace belongs to the side that has the most efficient equipment.

Seagrave Fire Apparatus powered with dependable Seagrave V-12 Motors, always assures victory over man's worst enemy — Fire. Today, in these difficult times Seagrave Apparatus is playing an even more important part in the defense of the home front and the defense abroad.

The SEAGRAVE CORPORATION Columbus, Ohio
BICKLE-SEAGRAVE, LTD., Woodstock, Ont.



★ ★

Refer to the
WHERE TO BUY SECTION
Page 209

★ ★

CORRESPONDENCE

Fire Prevention Activities of Chariton, Iowa, Fire Department

To the Editor:

With regard to fire prevention, we are giving prizes to the three best letters written by Chariton school children on what they have done to prevent fires during the winter season. Prizes are to be awarded during the last week of school, and will include a $25.00 defense bond, and a $10.00 and $5.00 book of defense stamps.

To strengthen our department during this war crisis, we have called back into service several of the older members who were retired after ten years' service. This gives us approximately fifty men which we think adequate to handle any emergency in our community.

We are very well supplied with equipment and all members are volunteers serving without pay at all times, including the Chief.

The local department has purchased a $500.00 defense bond, and expects to buy more in the future.

Your truly,
GUY R. WILLIBY, Chief,
Chariton Fire Department.

Savannah Fire Department Fights Fire Thirty-five Miles Away

To the Editor:

On November 27 at 8:56 p.m., Chief Walter S. Blanton received a telephone message from the Seaboard Air Line Railway, stating that several cars had turned over at Pembroke, Ga., about thirty-five miles from Savannah, and that among the cars involved were two car loads of plywood, a tank car of gasoline and a tank car of diesel oil. The call was for assistance and Chief Blanton immediately dispatched Engine Company No. 3, consisting of seven men, a 1,000-gal. triple combination pumper loaded with 1,800 feet of 2½-inch hose and a foam truck with two men and loaded with foam chemical powder and two foam generators equipped to deliver 1,100 gallons of foam per minute.

He left in his car, equipped with a two-way radio set, with driver D. P. Dawson and the Hon. Henry T. Halin Chairman of the Fire Committee of the City Council, arriving at the scene of the fire in approximately forty minutes.

On arrival he found two box cars loaded with plywood burning. The tank cars of gasoline and diesel oil were turned over and also burning. A good wind was blowing the flames from the gasoline and diesel oil tank cars toward the cars loaded with plywood. He saw that it was impossible to fight the fire effectively with foam.

The City of Pembroke has for its water system, a gravity tank which is supplied with a gasoline pump. The pressure was excellent after the apparatus was placed into service.

It was necessary to lay off 1,600 feet of 2½-inch hose to reach the fire. First the fire in the two box cars was cooled. Then a fog nozzle was placed on the hose and with 300 pounds pressure, started with the wind to extinguish the gasoline and oil tank car fires. They

succeeded in extinguishing the fire and kept the tanks cool until Captain Womble of Engine Company Three, under the fog nozzle, proceeded with wet burlap and rags and stopped the flow of gasoline and oil.

At 12:38 a.m., November 28, while the Chief was preparing to leave Pembroke for Savannah, the fire being under control, he received a radio message over the two-way set in his car stating that a fire was raging in a five-story building on the water front, and a three-two alarm sounded. He left Captain Womble in charge at Pembroke and immediately proceeded to Savannah, arriving in about thirty minutes. Twenty minutes after he took charge of the fire, it was completely under control and he was able to dispatch some of the apparatus back to quarters.

Letters were received from the Superintendent of the Seaboard and the Mayor of Pembroke, commending the Chief and the firemen for the efficient manner in which the fire was handled.

Yours very truly,
J. W. ALBERINO, Secretary,
Savannah, Ga., Fire Dept.

Creosote in Chimneys

To the Editor:

In your issue of January, 1942, there appeared under "Questions and Answers" an article on the formation of creosote in chimneys, and the cleaning of the same, and asking about some way of dissolving the creosote. Your answer is in the negative, that burning out is the only remedy and you suggest just how to do the operation.

Now without posing as an expert or a chemist, but with seventeen years' experience, in which 80 per cent of our alarms are for chimney and pipe fires, and after studying the question, I am going to say that I do not agree with you.

Can creosote be dissolved? Yes. There is a powder that will do this work; in fact, several are on the market. In 1927, I imported a shipment from New York and gave it a good many tests before I was convinced that it would function, and since that time we have used a great deal of it to extinguish chimney and pipe fires as well as selling lots of it to the citizens to prevent their chimneys and pipes from clogging.

I am not going to give you the trade name as there are more than one in the game, but I can say that both of our trucks carry several packages at all times, the procedure being to scatter the powder over the red hot fire and open the drafts. The fumes thus expelled go up the chimney and smother the fire and dissolves the creosote lining. So far, so good. Periodical burning of this powder in the stove will keep the creosote from forming by removing that part of the substance which is subject to fire.

The periodical burning of sulphur, zinc, or for that matter, old batteries, will accomplish the same effect. Many boilers, ranges and stoves lose a great deal of their effectiveness through being coated with a substance similar to creosote, and much heat is insulated inside the heating device thereby, so that a monthly treatment of one of these agents acts as a "laxative," cleans it out and enables it to produce more heat.

In burning of wood (in this country thousands of cords are used each year)

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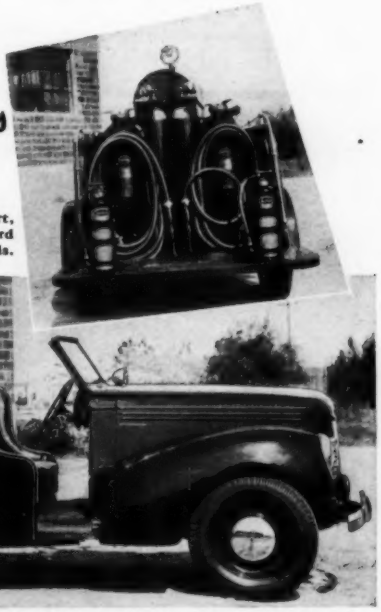

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His name is FIRE and uncontrolled this major saboteur can do more damage than any other element. The National Fire Waste Council has this to say, "At a time when economy and conservation can contribute so strongly to the national effort in behalf of increasing production, it becomes the duty of each person... in fact the whole nation to put an end to preventable waste through fire." You can kill paint, oil, lacquer, alcohol and electrical equipment fires in split seconds with C-O-TWO*.

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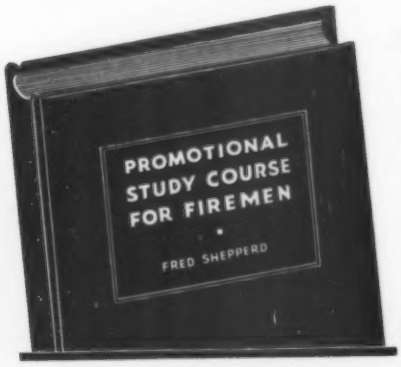

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there is always a danger from chimney and pipe fires, and we have to be constantly on guard against this menace, hence our object in giving the subject a great deal of thought.

As to matter of burning out the chimney, I might say that I have had many citizens ask me for advice on that, too, and I have never advised anyone to do so. I would not permit anyone to burn one out in my home, for I think the other method is safer.

I could tell you the method we use in handling chimney fires, but this epistle will cover the question I wished to discuss. I know many of the "Gang" will disagree with me on these remarks, but I feel that I am merely quoting my own experience and the opinions of some of the men who have made a study of this question and are qualified to speak.

Very truly yours,

ALLAN H. CLARK,
Chief, Lakefield, Ont., Fire Dept.

Gasoline Fire Threatens Jamestown Business District

At least five persons were seriously burned, one fatally, on February 28 when flames engulfed half a city block in the heart of the business district of Jamestown, New York. A tank truck of the Socony-Vacuum Oil Company was unloading gasoline in the garage of the Downtown Garage Company when for some unexplained reason it exploded, showering the employees with the flaming liquid. Inside of a minute the structure was a roaring inferno and was visible for miles.

At the time of the explosion, Chief Rudolph Swanson was passing the corner and heard the roar. He immediately ordered a third alarm assignment over the two-way radio. Eleven pieces of apparatus responded and twenty lines were used to combat the flames. The fire was out at 6:30 p.m., three hours after it had started, with three companies standing by all night.

Fifty cars were damaged, with a total loss to twenty. Seventy-five thousand dollars damage was the estimate. Jamestown has a water pressure of 130 pounds at the hydrant in the downtown section.

Chief Swanson was assisted by Assistant Chiefs Martin and Swanson and seventy-five regular firemen. He received first degree burns of the hands in the rescue work.

The department had to use a portable cutting torch to get some of the cars apart after the second floor gave way and dropped five cars on top of the first floor cars.

One car that went through the fire untouched was a 1905 Stanley Steamer with a beautiful set of tires. Everything around it was wrecked.

GORDAN R. MULLINS.

Edward J. Kerr, Chief at Pittsburgh

A veteran of twenty-five years service with the Pittsburgh, Pa., Bureau of Fire, Senior Battalion Chief, Edward J. Kerr, was promoted to Chief of Department on January 6th by Director of Public Safety, Col. George E. A. Fairley, to fill the vacancy caused by the retire-

ment on pension of Chief of Department, Nicholas A. Phelan.

Chief Kerr had been a Senior Battalion Chief for four years, with day quarters in the general office of the Fire Bureau, and thus had worked closely with Chief Phelan in the management of the Bureau.

Chief Kerr is 47 years old and one of the youngest men ever appointed to the position of Chief of Department.

The Chief joined the Fire Department, July 10th 1916, the day the two-platoon system was established and was assigned as a Hoseman to Engine Company No. 43, where he remained for eleven years, during which period of time he acted as Chauffeur for Battalion Chief Daniel Jones, now retired and the late Michael F. Shanahan, who was Chief of Department from May 1923 until June 1926. Chief Kerr also filled the position of Pumpman of Engine 43.

On February 1st, 1927, he was promoted from Pumpman to Captain, and assigned to Engine Company No. 41. On April 16th, 1927, he was transferred from Engine 41 and put in command of the newly organized Squad Company No. 1, in the downtown business district. On January 1st, 1933 he was transferred to Engine Company 59 as Captain; on April 1st, 1934, to Captain of Engine Company No. 19; on February 1st, 1937, to Captain of Engine Company 44 on the North Side where he remained until May 21st, 1937, when he was promoted to the position of Senior Battalion Chief, with Quarters at Engine Company No. 3 in the downtown business district and the general office of the Fire Bureau.

WILLIAM E. PATTERSON.

Oil Station Fire Causes Heavy Loss

Scorched earth and the tangled debris of an office building and three 20,000 gallon gasoline and fuel oil storage tanks marked the scene of a $100,000 blaze on January 22, at the Penn Service Oil Company, Pottsville Pike, Pennsylvania, in which five firemen were injured.

Static electricity was blamed for the blaze, one of the most spectacular in the history of the city. At times flames were visible within a five-mile radius. Clouds of black smoke, pouring from the seething inferno for more than five hours rolled over the city.

A gasoline truck was being filled from tank No. 3 about 4:30 in the afternoon when the blaze began with startling swiftness. A streak of flame shot from the nozzle of the gasoline hose back to the storage tank, causing an explosion. Within thirty seconds the entire yard was in flames which rolled toward the office of the company.

Paul Dickinson, an employee of the Penn Service Oil Company, leaped into the cab of the truck, the rear of which was blanketed with flames, and drove it about 250 feet away from the tanks before the heat forced him to abandon it.

By the time firemen from eight city and suburban companies arrived, storage tank No. 1 was completely enveloped in flames and fumes from the air vent on tank No. 2 had been ignited and were blowing a torch of flame from fifty to seventy-five feet in the air.

Firemen were forced to lay hose lines to the Muhlenberg Township High School, where a hydrant is located, and

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to the Balthaser furniture store, about a mile away. Meanwhile fuel oil escaping from a fissure in tank No. 1, which was buckling under the intense heat, flowed across the thirty-five feet of ground between the tank and the office building, accompanied by waves of flames. In five minutes the two-story frame structure was a pillar of fire.

Tanks Nos. one, two and three, the first two of which contained 20,000 gallons of fuel oil each, and the third, 20,000 gallons of gasoline, were damaged beyond repair and their contents burned out. Three other adjoining tanks, two containing gasoline and one keresene, were undamaged. That the blaze did not spread to the three other tanks were credited to Harold F. Leinbach, hoseman of the Goodwill Fire Company No. 1, Hyde Park, Pa., who cut off the gasoline flow from tanks numbers three and four to burning tanks number one and two.

So intense was the heat from the blazing tanks that firemen used metal advertising signs as shields as they sprayed water and chemicals on the flames. Most of the time they concentrated on a large warehouse, located about seventy-five feet from the tanks, in which were stored 1,400 new automobile and truck tires. Constant streams of water were played on this structure, and it was not damaged by the fire.

Fire Pump Committee

The formation of a fire pump industry advisory committee was announced by the Bureau of Industry Advisory Committees. Committee members are:

E. M. Jenkins, president and treasurer, American Marsh Pump, Inc., Battle Creek, Mich.; W. C. Dowd, vice president, Dayton-Dowd Co., Quincy, Ill.; Carl C. Harris, president, Hunt Rodney Machine Co., Orange, Mass.; E. J. Wendell, president, Hale Fire Pump Co., Conshohocken, Pa.; William K. Sims, chief engineer, LaBour Co., Inc., Elkhart, Ind.

New Fireproofing Chemical Developed

Wearing coveralls treated with a new liquid formula, Dr. O. T. Hodnefield, a Los Angeles chemist, walked around in fire, picked up the flaming, gasoline-soaked straw and cradled it in his arms —and came out unscathed.

The liquid, which acts as a heat insulator as well as a fire extinguisher, can be used safely on magnesium-thermite incendiary bombs.

WHAT'S BURNING?

THE following list includes fires of $50,000 loss and over in the United States and Canada, for the month of February, 1942. These figures, compiled from the telegraphic reports, are based on estimates made at the time and are subject to later investigation and consequent revision. Taken as a whole, however, they are an approximately correct view of the losses incurred. The figures represent losses in thousands of dollars.

Month Ending February 28	Loss in Thousands of Dollars
Winnipeg, Ont.—Campbell block destroyed	50
Pittsfield, Mass.—Federal Bakery and adj. property	170
Chelsea, Mass.—Big Chief Market and Spartan Club, destroyed	50
Owwosso, Mich.—First Baptist Church destroyed	80
Paterson, N. J.—Manhattan Hotel and adj. business property	50
Watertown, N. Y.—First Methodist Church destroyed	65
Tyrone, Pa.—Wilson Court Bldg., business and apt. structure	60
Mt. Juliet, Tenn.—Elementary school destroyed	50
Charlestown, Mass.—Pier shed of First National Stores, shed and foodstuffs destroyed	110
Dubois, Pa.—Ice plant of Dubois Brewing Co., destroyed	50
Latta, S. C.—Loading platform of Atlantic Coastline R.R. including loss of cotton, fertilizer and cement	50
Madison, Ind.—Voltz Garage, housing Chevrolet Agency	80
Linwood, N. C.—Plant of Linwood Mfg. Co. destroyed	50
Loris, S. C.—Butler bldg. and adj. tobacco whse	50
Montgomery, W. Va.—Kroger store and adj. property destroyed	50
Levis, Que.—Property owned by Wilfred Thivierge, damaged	50
Washington, D. C.—Federal office bldg. on 16th St., damaged	425
South Bend, Ind.—Administration bldg. of South Bend Airport, destroyed	65
Bar Harbor, Me.—Old Congregational Church and adj. property	65
Hyannis, Mass.—Steel and cement plant of Hyannis Garage, Inc.	170
Anadarko, Okla.—Whse. of Chickasha Cotton Oil Mill, damaged	50
Philadelphia, Pa.—Business and residential property, Ridge Ave. and 23rd St.	800
Pottstown, Pa.—West Pottsgrove Township Junior High School, damaged	100
San Fernando, Cal.—J. C. Penney Co. dept. store damaged	150
Chicago, Ill.—St. Paul's Union Church, destroyed	80
New Britain, Conn.—Centrally located mercantile and apt. bldg.	250
Chicago, Ill.—Kenwood Garden apts., damaged	55
Chicago, Ill.—Property of Hubbard Oven Co., damaged	125
Reading, Ohio.—Factory of Loroco Industries, Inc., damaged	100
Bethlehem, Pa.—Phi Gamma Delta fraternity house, Lehigh University	50
Lake City, S. C.—Star whse., owned by W. A. McClam	65
Spartanburg, S. C.—Collins dept. store damaged	65
Dallas, Tex.—Automobile and foods bldg. at State fair grounds, damaged	250
Sherrill, N. Y.—Sherrill Hill School destroyed	90
Lauzon, Que.—Provincial Arts and Trades School damaged	50
Detroit, Mich.—American bldg., occupied in part by Arnold-Powers print shop	80
Columbia, S. C.—Bldg. occupied by Capitol Motors Inc., and Capitol Bowling Center	80
Hurley, S. Dak.—Consolidated School destroyed	80
Sarnia, Ont.—Business bldg. occupied by Walker Stores and other establishments	80
Sudbury, Ont.—Business property damaged	50
Westbrook, Me.—Carr block destroyed	80
Little Rock, Ark.—Bldg. housing Lindell Hotel, cafe and store	50
Fitchburg, Mass.—Mercantile bldg. at 655 Water St., destroyed	50
Bangor, Me.—Hammond Street business property damaged	50
Devon, Pa.—Unoccupied "Richards Home" destroyed	65

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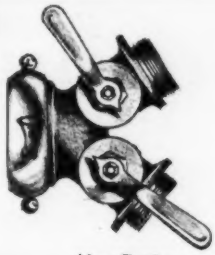

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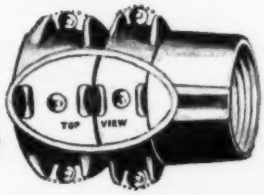

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Refer to the
WHERE TO BUY SECTION
Page 209

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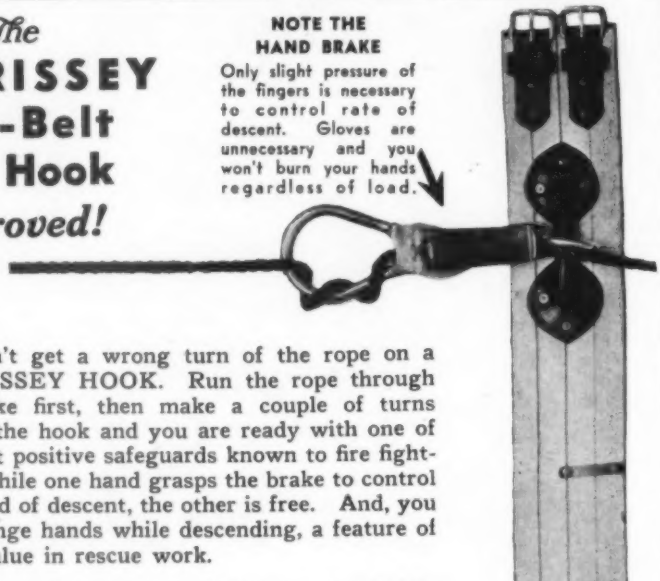
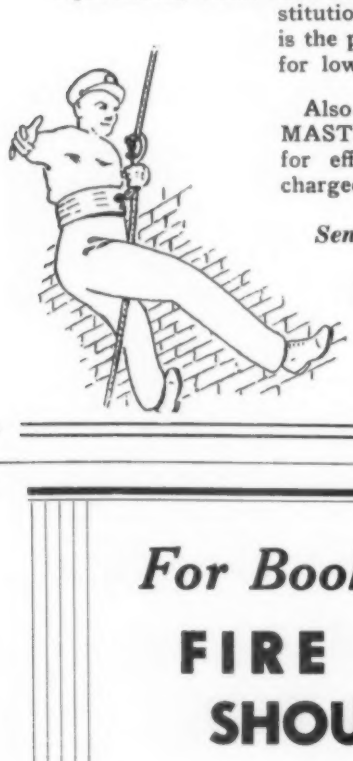
Only slight pressure of the fingers is necessary to control rate of descent. Gloves are unnecessary and you won't burn your hands regardless of load.



You can't get a wrong turn of the rope on a MORRISSEY HOOK. Run the rope through the brake first, then make a couple of turns around the hook and you are ready with one of the most positive safeguards known to fire fighters. While one hand grasps the brake to control the speed of descent, the other is free. And, you can change hands while descending, a feature of great value in rescue work.

We manufacture and distribute the MORRISSEY HARLEY FIRE ESCAPE, a new and simplified easy-to-use individual fire escape, for use in all public buildings, such as Hotels, Apartments, Office Buildings, Schools and Institutions. Fire Chiefs—this is the perfect type of escape for lowering bodies.



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Easton, Pa.—Plant of Forrest Pierce Dye Works, destroyed	170
Vancouver, B. C.—Mainland bldg. on Cambie St.	80
Stockton, Cal.—Electric Planning Mill damaged	50
Dexter, N. Y.—Power house of the Dexter Sulphite Pulp & Paper Co.	50
Lone Rock, Wis.—Sullivan bldg. destroyed.	65
Wynyard, Sask.—Emerson bldg., housing garage and stores	80
Elkhart, Ind.—Property of Elkhart Bedding Co., damaged	50
Hutchinson, Kan.—Manual training bldg. at State Reformatory	50
Reidsville, N. C.—Dutch windmill on Chinqua-Penn Plantation, 2 mi. out	70
Mansfield, Ohio—First Congregational Church damaged	170
Dartmouth, Mass.—Garage of W. J. Bent, destroyed	50
Meadville, Pa.—Radford apt. bldg. damaged	50
Toronto, Ont.—Horway Public School damaged	65
St. Johns, Que.—Business property housing Langlois & Co. furniture store	250
Bosworth, Mo.—City Cafe and adj. property	50
Wytemville, Va.—Kincer-Miller Hardware Co. store destroyed	70
Stettler, Alberta—National Hotel damaged	80
Cartierville, Que.—Lumber yard shed and plant of A. H. Langevin	50
Upton, Ky.—Grade and high school bldg. destroyed	50
Shreveport, La.—Goldring's dept. store damaged	80
Wichita Falls, Tex.—Property occupied by Wichita Falls Meat & Provision Co., damaged	80
Davenport, Iowa—Davenport Artillery Armory, destroyed	65
E. Jordan, Mich.—Whse. of E. Jordan Canning Co.	65
Kansas City, Mo.—Kansas City Waste Paper Co. whse., destroyed	50
Quebec, Que.—Sequin Bldg. and adj. business property	180
Bridgeport, Conn.—Park City Hotel damaged	50
Jamestown, N. Y.—Garage in downtown area together with 69 cars	50
Christiansburg, Va.—Bldg. housing A. R. Jones grocery and other business establishments	80
Richmond, Va.—Wholesale grocery of Kersten and Kenny Companies	120
Lenoir, N. C.—Hudson school building, destroyed	100
San Antonio, Tex.—Plant of T. D. Anderson Furniture Co.	80

January Fire Loss

Fire losses in the United States during January were $35,565,000, according to the estimate given out by the National Board of Fire Underwriters. These estimated losses, under fire insurance policies, are on an incurred basis, including an allowance for unreported and uninsured losses.

The January losses, with the exception of January, 1940, were the highest in any month back to 1933. In January, 1940, a loss total of $36,260,000 was reported. A sharp increase of 34 per cent was registered over the $26,470,000 reported for January, 1941, while a rise of 14 per cent is shown over the December, 1941, losses.

The heavy losses can be attributed in part to the exceptionally cold weather in some parts of the country during part of the month. Increased activity due to the war program and bad industrial housekeeping also are believed to be responsible for some of the losses.

Lewis Chief at Scranton

Edmund B. Lewis, former Chief of the Scranton Fire Department who was retired on pension in 1934, has been reappointed Fire Chief upon the retirement of John Griffiths. Chief Griffiths retired on pension after thirty-four years service, four of which have been spent as Chief.

For Books Every
FIRE FIGHTER SHOULD HAVE
★
See Page 116

WAR FARE

Alarms and Discussions Clipped and Culled from the War News of the Day, of Interest to the Fire Service.

Roi B. Woolley

To Smoke or Not To Smoke

Production in Army tank arsenal operated by Chrysler Corp., Detroit (Mich.), ceased because of reported dispute by workmen over smoking. When a number of workers who were smoking in the defense plant were ordered by foreman to leave as result of their breaking "no-smoking rule," about 1500 men on night shift departed. Plant was forced to close about 3 a.m. Men were members C.I.O. United Automobile Workers. P. S. Difficulties were later adjusted.

* * *

Mutual Aid Plans Perfected

Under the direction of Commissioner and Chief Patrick Walsh, with Asst. Chief of Department, John J. McCarthy in Charge, the New York Fire Department has perfected plans for going to the aid of, or of calling for help from, its neighboring counties, Nassau and Westchester, and part of the State of New Jersey. Many good men had a hand in the actual planning, including Acting Deputy Chief Fred Wedemeyer (who learned about mutual aid in London), Chief of the Bureau of Fire Alarm Telegraph, Val' Fendrick, and his coworker, Wm. Hennessy, and others. Later on, if permitted, we hope to publish the details of this enterprise. At present, however, it's pretty much "hush, hush."

* * *

Cut Out the Cheesecake

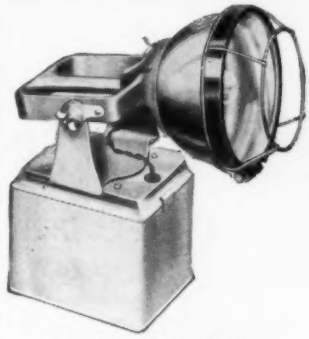
You remember those "shipboard" pictures, taken of young women (funny, they're always *young*) perched on a ship rail or lifeboat, with gams crossed to expose a large acreage of nylons; The news reporters have a name for this kind of picture. They call it *"cheesecake."*

Well, lately, "cheesecake" has come to the Fire Service. The newspapers are beginning to fill up with pictures of women (un huh—they're always *young and nifty*, when they pose for these photographs) "manning" a fire truck, or "directing a high pressure stream" or "servicing" the fire trucks or serving as "house watch." Confidentially, Brothers, no matter how they cut it, it's still "cheesecake." Doubtless there'll be a place for the lady "vamps" and "auxiliaries," but we'll bet our Aux' fireman's pin to a last year's doughnut that they won't be doing "truck house duty" pictured in the romantic (?) photos. Photogs—have you got a hunk of "cheesecake"? If so, send it in, we're making a collection of such incunabula.

* * *

A Lucky Leak!

A lucky leak in a fire extinguisher may have averted a tragedy in some Kansas community. An extinguisher which leaked after it was refilled by a traveling salesman was taken to Arkansas City Fire Department for repair. Firemen sniffed, squirted some of the fluid on a rag and applied a match. It exploded. State Fire Marshal Clyde Lat-



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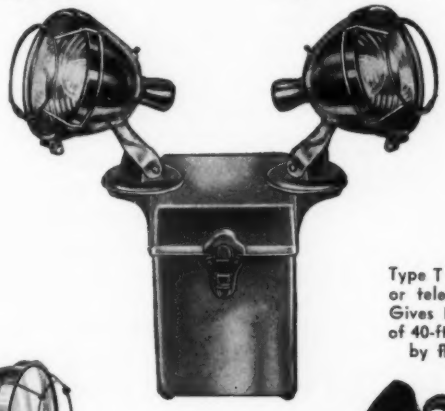

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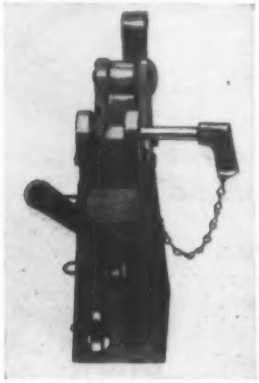

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The PRESSURE-MASTER is a new approach to an old problem, that of closing off pressure in a charged line at a given point on the line. It employs hydraulic pressure in place of the old obsolete "Beef and Brawn" method. Invented by a fire chief the PRESSURE-MASTER is so designed that a 10-year-old child can close down a pressure of 100 lbs. in 10 seconds and regulate the return flow from a drip to full pressure. It saves time, energy and labor and makes dangerous tasks easier and safer for your men. It will not injure the hose and a slight twist of the valve releases the pressure as gradually as desired. It is quickly applied and easy to operate. It is always certain.

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Refer to the

WHERE TO BUY SECTION

Page 209

★ ★

chem dispatched the salesman back over his territory to reclaim the extinguishers. Highly flammable carbon bisulfide had been poured into them in place of carbon-tetrachloride.

* * *

No Retreat

A big bus filled with soldiers caught fire en route from Fayetteville (N.C.) to Ft. Bragg. The driver snatched an extinguisher and began playing stream on the fire, meanwhile exhorting the soldiers to fly! Not a sodier stirred. Soon firemen arrived and also implored the men to leave the bus.

"Nothing doing," they protested, *"we might lose our seats."* And they sat right there until the blaze was out and the bus resumed its trip.

* * *

We're in a war, and it's no "still," but an "all-out" "general alarm," worker. Now, mebbe, some of us will get a little better understanding of what our Brothers in Britain were up against. But one thing sure—whatever betides, the smokeaters on the "home front" will put up the same sort of scrap being waged by their battling Buddies in the Nation's armed forces.

An item comes from Manila. It tells about Alfred G. Eugenio, Philippine national air raid warden, who was burned severely on both hands while experimenting with phosporus incendiary cards for use in wartime demonstrations. Well, after going through what happened on Boston Common during the International Convention, we coulda told Warden Eugenio to lay off the phosporus—even in matches. But, tennyrate he sets a good example to the million or more American Wardens.

* * *

A Wartime "Ripley"

From London (via J. W.) comes account of how a bomb blast made a fireman's heart, lungs and stomach change places a fraction of a second before a shrapnel splinter pierced the spot where his heart should have been.

This freak of the raid is attested to by surgeons who mended wound and then put 41-year old Norman Daniel's organs back where they belonged.

Daniels was fighting a fire during a heavy raid on London when he heard whistle of a bomb. He was bowled over by blast and a splinter pierced his chest. When surgeons, amazed that he had survived what apparently was a heart wound, examined him at Charing Cross hospital, they found the blast of the exploding bomb had moved his stomach, heart and lungs.

* * *

Standardized Air Raid Signals? ? ? ?

Confusion from multiplicity of air-raid alarm systems throughout country has led civilian business and other interests to ask O.C.D. to establish uniform air-raid precaution alarm. As evidence, there are five different signals in as many communities on Post Road in Westchester County (N. Y.) alone. Peculiarly enough, the *"warning"* signal of one community is the *"all clear"* signal of the neighboring place.

* * *

Finds Fire Bomb Remedy?

Discovery of new effective means of extinguishing magnesium fire bombs is claimed by Bureau of Mines. Director R. R. Sayers says experts have found that when tar, in granulated or flaked

form, is thrown on bomb it quickly forms air-tight blanket which smothers flame. It's claimed method is superior to sand or prepared compounds. The hard-coal tar, sometimes called "fuel pitch," can be had through commercial firms at reasonable cost. Granulated or flaked form is necessary because a powdered pitch has explosive characteristics. Experts from Chemical Warfare Service agree on effectiveness of the new extinguishing agent, but counsel careful application of it. Unless properly applied, it's said, you'll not only have a good bomb fire, but a nice "pitch" fire as well to put out.

* * *

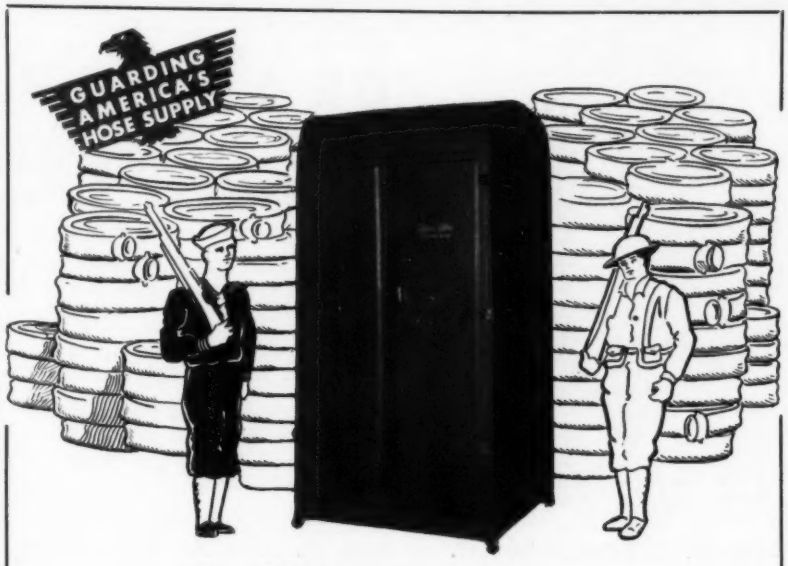
Philadelphia Blackout

Nation's third largest city underwent trial blackout early this month which was reported highly satisfactory. For 15 minutes 3,500 square miles were utterly dark—or nearly so. No autos moved. Observers cruising overhead noted many nearby industrial plants were lit up like Christmas trees. Some adjoining towns refused to cooperate, and a few citizens were fined various sums for deliberately ignoring restrictions. Four neighboring Counties in Jersey successfully joined in with Philadelphia although a burning barn lit up Maple Shades, suburb of Camden. Five fire companies worked to "dampen it down." No serious accidents reported.

* * *

Hot Off the Ticker

During a lecture on air raid precautions some miscreants set fire to wastepaper basket in Public School 179, New York City. . . . An alert air raid warden discovered early morning blaze in a Brooklyn Public School, called the Brothers: a 4-alarm blaze. . . . Another watchful air spotter of Mamaroneck (N. Y.) detected fire in a boathouse, gave alarm, prevented much loss. . . . When over-zealous wardens in practice blackout stopped Vamps from heading for their firehouse in a Westchester (N. Y.) community, result was a free-for-all with winners still in doubt. . . . Charles Phelps, for over 70 years 'bell-ringer' for town of East Jaffrey (N. H.) for many years has new duty—to sound the local air-raid alarm. . . . Steam siren, discarded over 25 years ago as a fire alarm by city of Orangeburg (N. C.) has been resurrected. Claimed siren can be heard 10 miles. . . . Board of Education, New York City considers 250 of its structures unsafe under aerial attack, recommends other shelters. . . . In Martinez (Cal.) an air-raid siren under test flew into pieces injuring five boys. . . . During a blackout in Salinas (Calif.) Hugo Pedruzzi, 39 was killed by lightless auto. . . . Senator Thomas ordered resolution in Senate asking that Senate wing of Capitol be surveyed so that shelters could be installed. . . . When big 4-motored bomber crashed, hit house nor'east of Tucson (Ariz.) crew was injured, but fortunately there was no explosion and fire! . . . People in Trenton (N. J.) got so excited when they mistook a Trenton factory's fire alarm whisle for an air raid warning they tied up phone lines, halting air spotters from reporting to army info' center in N. Y. C. (thanks to several contribs). . . . 5,000 boarded up tenements in greater New York are considered serious hazards in event of air raid, it is claimed. . . . Over 50 N. Y. C. A.R.P. Wardens went to work at



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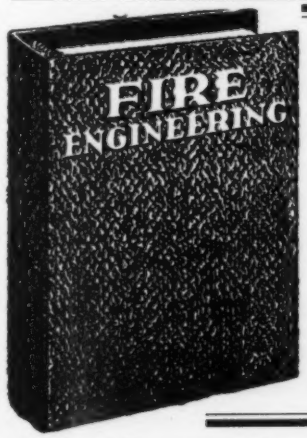

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2-alarm fire in Harlem (N. Y. C.). . . . A $500 air raid whistle was stolen in Cohoes (N.Y.)—had never been blown, but it "blew the coop." . . . Rubber-nosed 'tennis ball' time bombs were dropped by Japs on Singapore. . . . A thunder clap in Philadelphia was mistaken for bomb and air raid. . . . Job of turning out 31,000 N.Y.C. Street lights in raid still has City dads guessing. . . . Much fuss in Westchester over construction of air raid shelter for pets (meantime there's still a lot to be done for the kids!). . . . New York's 25,000 cab drivers are supposedly "all set" to cooperate in air raid. . . . The Nazis have bomber, in the Dornier 217, which is designed to fly 4500 miles with bomb load of 5 to 6 tons. . . . New York's first 70 air raid sirens ("warbling" type) will be installed soon. . . . Crews of British tankers operating in danger areas are to be equipped with fireproof clothing as protection against burning oil. . . . Three of crew of twin-engined bomber were killed when plane crashed and burned in Tacoma (Wash.) authorities cleared area for half-mile around scene for fear of explosion of bombs it carried. . . . Chief Samuel Russell, Ottumwa (Ia.) has set 35-mile speed limit on apparatus for ordinary runs to make fire equipment last longer. . . . Chicago firemen are to train 20,000 in huge defense plan in which handling of incendiaries will spearhead. Course to be taught in 142 fire stations. . . . Fears are being expressed in high circles that the small amount of industrial sabotage (discovered) will cause industrial management to be thrown off guard and be caught with its trousers, half-mast later on. . . . Commissioner and Chief Patrick Walsh, N.Y.F.D., has 'retired' 15 chiefs' autos as part of tire economy plan. . . . It is said the "waste" drives have resulted in necessity of many incinerator plants purchasing oil, due to shortage of paper and other refuse stocks which ordinarily furnish fuel to plants. . . . Eight men and six women in Brooklyn were fined for smoking in defense plant. . . . OCD and War Board have agreed on no financial aid for building of air shelters. . . . Wm. Courtney, World War aviator and organizer of London's balloon barrage, says: *"German air raids on the Atlantic coast of U. S. are so feasible I am surprised they have not happened."* . . .

* * *

"War Fires"

SPRINGFIELD (Mass.): New service building construction at Springfield Arsenal burned, loss $100,000 plus 3 months delay in manufacture of Garand rifles, "Careless workman" blamed

BROOKLYN (N. Y.): Firemen battled in relays all day, to subdue fire in holds of Brazilian Line freighter Pecone, in Brooklyn. Thousands of bags of castor beans gave off deceptively sweet smoke in which firemen worked without apparent ill-effects until suddenly their knees buckled and they had to be helped to pier. Members of Rescue Squad cut holes in deck. As many as 20 firemen were under treatment at one time. Loss heavy. Cause "unknown," "inquiry instituted."

MANILA: Priceless library of centuries was destroyed in the bombing of the Santo Domingo Church, Manila. Church's priceless treasures

were unprotected by insurance. Library contained complete history of Philippine dialects spoken during last 300 years, and archives and history written by Dominican fathers since Christianity was first brought to Philippines. Cause? "the Japs."

SHIPSHAW (Quebec): At least 15 workmen were known dead, many more missing in worst fire in history of Northern Quebec when wooden barracks burned. Construction camp housed 2000 to 5000 workers on a $35,000,000 power development. It's claimed gasoline was used to set the fire which trapped many in their bunks.

TOKIO: Here's one we don't mind printing. Half of Japanese Foreign Office was burned early last month in fire caused, claims Jap news agency, by overheated stove. Too bad the fire didn't spread—but have patience, folks!

NORWAY: Oslo radio reported fires broke out at both the city's east and west railroad stations few hours after induction of Major Vidkun Quisling, Nazis' puppet premier of Norway, early this month. Several persons injured—losses heavy! Epidemic of serious fires in that country reported to be on increase.

NEWARK (N. J.): Four one-story frame buildings housing part of Scully Steel Products Co., Newark, were destroyed by fire, loss $100,000. Buildings used for making steel drums for gun-powder under defense contract. "Arson Squad investigating."

STATEN ISLAND (N. Y.): Hampered by excessive cold and gale winds, New York firemen fought tough blaze in warehouse and carpenter shop at ferry terminal, St. George, S. I. Loss heavy. Cause?—You guess—just another of the multiplying waterfront fires!

11,000 Bales of Cotton Lost in Buenos Aires Fire

One of the most disastrous fires in Buenos Aires waterfront history caused damage estimated at $500,000 and destroyed or damaged 11,100 bales of cotton.

The fire, of undetermined origin, started in the 300-foot long cotton depot, a four-story structure, and menaced nearby warehouses. Hundreds of city firemen battled the flames for many hours. The Argentine steamer, Rio Corrientes, was moved from its nearby berth when menaced by the blaze.

Farm House Destroyed by Fire

On the morning of January 31, a fire of undetermined origin, destroyed the newly constructed farm house of Mr. and Mrs. Harvey Kimball of Woods Hill Farm at Pomfret, Conn. Their three and a half year old son burned to death in the fire.

The Pomfret and Brooklyn Center firemen responded to the call for help, but found the fire too far advanced on their arrival to be controlled. The house was a new one, built only two years ago to replace the old George Kimball farm house that burned several years ago one Easter Sunday while all the members of the household were away for the day.

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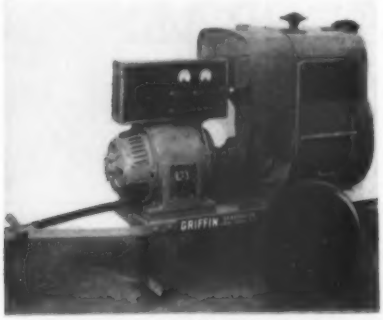

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Siren News!

Efforts to effect standardization of air raid notification signals in Westchester (N. Y.) County—and elsewhere, aren't making very fast headway. Fault seems largely to be inability of local authorities to agree. Thus in stretch about 12 miles on one road, of six communities there are five different air raid alarm signals. In one place they blow four 5's as "alarm" and four 3's as "all clear" while in very next community they blow four 3's as "alarm" and four 5's as " all-clear.

* * *

The whistle on a subchaser being built in the Bronx (N. Y. C.) was tested. People in nearby sections became excited—some panicky. They thought it was an air-raid alarm!

* * *

For 38 bucks some Long Island county defense directors got old tugboat whistle, installed it on top of Old County Court House, Mineola (L. I.) and used it to toot air raid alarms. Papers reported its first toots are like opening notes of Beethoven's Fifth Symphony. We dunno, we can only play chopsticks!

* * *

Sing Sing's alarm whistle, which for years has roared out warnings that a prisoner in gray uniform is at large, is to be used in the war, it has been revealed, to warn Ossining (N. Y.) and the countryside for miles around if an air raid is threatened.

* * *

Air-raid sirens can't compete with the East Texas "jungle telegraph"—the baying of pine woods "houn' dogs" and the clanging of farmers' plowshares—Texan civilian defense officials have declared.

Andersun County (Tex.) tested its unique and original air-raid alert technique recently and found it satisfactory. In just six minutes flat, test alarm was spread from Palestine to the remotest part of the County. At 8.20 p.m. siren wailed in Palestine for prearranged 30-minute blackout. Operators flashed word "blackout" to all air-raid wardens in strategic parts of County, 40 by 30 miles. From then on, the hounds and the farmers took over. Farmers hammered old plows, brake drums, and oxygen cylinders, rang old plantation bells and blew on fox horns, but the baying of their hounds rang further and wider than all their man-made noises!

* * *

This the Reason?

Letter to New York *News* said: *"Many are inquiring why workers on the Normandie did not first remove the mattresses which caused the fire to spread so fast. The reason may be that they were afraid their union would fine them if they engaged in any outside work, even if only for a few minutes. And perhaps the fire alarm system was delayed because no walking delegate was around to grant his gracious permission to turn it on."*

An editorial in a Westchester (N. Y.) paper tells about a young man who worked on ship who claimed he was ordered by labor bosses to mind his own business and not worry about the "no smoking" rules, or doing work like moving hazardous materials from within range of a welder's torch. He said he wishes now he had had the courage to complain of the carelessness and disregard of warnings—but at the time he was afraid to.

The Watch Desk

(*Continued from page 172*)

daughter, seriously injuring wife and two police officers. They raised ladders so police could get to roofs and attack besieged crazed man from above. . . . Gordon Mullins, bashful buff, reports he has been engaged by New York State to serve on its fire training vocational program as mo'n picher operator. . . . When fire swept distillery of famed St. Bernard Abbey, Milan (Italy) large quantity of brandy those St. Bernard dogs carry for benefit of travelers lost in Alpine snows was destroyed. . . . Fireman John Lynch E 64 N.Y.F.D., fell through pole-hole, dislocated right elbow. . . . Report of Factory Insurance Assn. says that a watchman in Fall River plant of Firestone Co. shut the water off in sprinkler system shortly after the $15,000,000 fire was discovered on Oct. 11 because he feared greater water damage than fire damage. . . . Orchids to N. Y. fire alarm key men, Louis Turner and Wm Downs, Bronx (N. Y.) fire alarm station for masterful way they handled two 2nd, one 3rd alarm fire and several other alarms and special calls all within 54 minutes. . . . Russell Croff, filling station attendant, Helena (Mont.) discovered small blaze beside a heating stove in building. He grabbed a nearby bucket filled with fluid he thought was water and tossed it onto flames. It turned out to be high test gosoline. Croff may recover (thanks, J.W.C.). . . . Then there's the sad story of H. H. Crockett of Austin (Tex.) who went before City Council and pleaded to be allowed to burn his weeds in peace. *"Our fire department's too efficient,"* he cried, *"every time I set fire to weeds on my property along comes the fire department and puts 'em out!—Mr. Mayor, have that fire chief leave me alone!"* . . . In Lincoln (Neb.) pop-eyed onlookers watched firemen leisurely unload and stretch hose then begin wetting the outside of a downtown office building which obviously was not afire! Seems that store owners, tired of waiting for a good rain, wanted to test repairs on leaky windows! Paste this one in your scrapbook! . . . Once again firemen and policemen are busy repairing discarded toys they have collected for distribution to needy children. . . . Members of Teaneck (N. J.) F.D. lowered Interstate Park policemen on long ropes to a shelf where two boys had become marooned and succeeded in getting them safely to base of 250 ft. cliff. . . . When B.P.O.E. Lodge 1,591, Newark (N. J.) burned $10,500 mortgage, with accompaniment of fireworks discharge, more than 1,000 calls swamped police and fire H.Q.'s. Everyone wanted to know *"where's the explosion?"* . . . . Fireman Leroy McIntyre, Pittsburgh (Pa.) F.D. had unique experience of rescuing his son, Edwin, 25, from perch atop 70-foot bridge superstructure, where boy, discouraged over family trouble, threatened to jump if anyone came near him. Father, reporting with his Truck company, calmed son, helped him down. . . . Fire in lumber store, Houston (Tex.) injured ten firemen and fire commissioner Mann, made heroine of 15-year old Elsie Wideman, high school student who dragged fireman E. C. Harton from beneath debris of falling wall. . . . Four students working on re-

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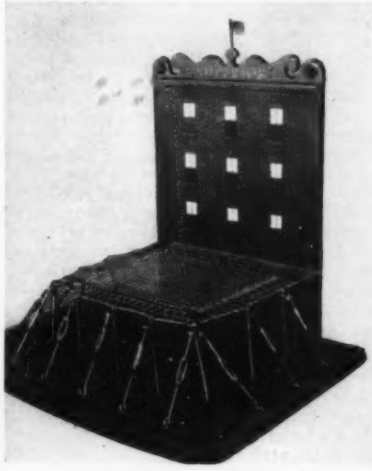

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search project in Chicago University were burned in explosion, fifth rescued. . . . Judy Garland's "house-warming" almost became house-burning when sparks from fireplace ignited rug. . . . An oxygen tent blast in St. John's Hospital, Yonkers (N. Y.), resulted in death of Anthony Bulhose, suffering from heart ailment. Blast ignited bedclothes, patient suffered fatal burns before attendants could reach him. . . . Five persons, all members of Omaha (Neb.) family, perished in rooming house fire. . . . Four men burned to death in fire that destroyed Monticello Hotel, Alexandria (Va.). . . . Floating theatre Show Boat, of Edna Furber's famous novel, burned, Savannah (Ga.). . . . Million bottles were ruined as storage warehouse in Philadelphia (Pa.) burned (all empty—unfortunately). . . . Several contrib's sent us news about members of Olympia (Wash.) F.D. who had to use tallest ladder to remove swastika flag from St. Michael's academy flagpole just before an Armistice Day parade passed the school grounds. . . . According to the Phoenician News, excellent 'buffs' "magazinelet" of San Francisco, that city's F.D. will see changes in battalion centers with new assignments, and whatnot.

* * * *

Stoney Brook (L.I.) will get a $60,000 fire house and recreation center as part of planned $600,000 village center. . . . Thanks to the dozen "clippers" who sent in items about the Spartanburg (S.C.) water-wagon fire. . . . Aid of school children as Vol. firemen in Dallas, news item says, helped cut fire rate 50 per cent first 10 months of 1941 compared with same period in 1940. . . . Here's how the orders from the Chief, Des Moines (F.D.) read: *NO LOAFING—VISITORS WELCOME—STATION DOORS LOCKED 9 PM TO 7 AM.*" . . . . Although he could have saved himself, an aged negro, Frank Winrow, 73, Lawrence Township (N.J.) refused to desert his invalid wife when fire razed their little home. Both perished. . . . Blazing gasoline spreading over flooded streets in Baton Rouge (La.), endangered lives of scores of New Year's revelers returning from night clubs. Cloudburst flooded streets, causing gasoline to seep from filling station storage tank. Auto's exhaust ignited gases; four business establishments, three residences destroyed. . . . When $200,000 dredge burned in Connecticut River, after completing 3-year job of clearing channel, Captain Floyd Reid complained the East Hartford F.D. *"just stood there on the bank and watched her burn."* However, Dep. Chief John Armstrong said river bank would not have supported apparatus. . . . When 4000 gals. of gasoline burned, following capsizing of truck on highway in Newark (N.J.) the driver, Thomas Corliss, was incinerated. . . . Chief George Geller (in charge Marine Division, N.Y.F.D.) was elected to Presidency of Naer Tormid Society, the Jewish organization of that Department. . . . Arthur Renna, 36, who killed Miss Rose Celetano and her niece, Louisa Viviano Feb. 28 in 1938 by settling fire to Miss Celetano's apartment in the Bronx finally paid penalty and was put to death, Jan 22 after many legal delays. . . . Village of Buchanan, Westchester County made news headlines when members of Vol. F.D built "Red Flyer"—a hose truck out of junk yard parts at a cost of $25. . . . Two dead, 13 hurt including six firemen in Newark in (N.J.) apartment fire when 8 persons were forced to jump into nets.

A Must under the
NATIONAL DEFENSE PROGRAM

The WHEAT SPOT-LIGHT

The strain of National Defense production puts a greater strain upon the Fire Departments that must protect industry. Equipment built for endurance as well as efficient service is the by-word of today's purchases in the fire service equipment field.

The Wheat Spotlight with its 25,000 candlepower light and its 1000-hour endurance battery is therefore a MUST for your Department. Its light weight and convenient shoulder strap allows the operator to have both hands free for other firemanic duties. It has either Spot or Flood reflectors and is invaluable to all departments large or small.

Single lamp charging outfit for operation on 110 V. 60 cycle A.C.

KOEHLER MFG. COMPANY
MARLBORO MASS.

Pentagon for Hydrant Operating Valves
Pick Head
Sheet Metal Ripper
Sheet Metal Spreader
Gas Valve Wrench (1½" to 4")
Round Base Sprinkler Head Wrench
Pin & Lug Type Hose Coupling Spanner Wrench
EMERGENCY TOOL
Rubber Grip (Dielectric Value 12,000 Volts)
Gas Valve Wrench (⅛" to 1¼")
Crow Bar
Nail Puller
Square Base Sprinkler Head Wrench
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for all FIRE-FIGHTING and DEFENSE SQUADS

★ Designed primarily for fire fighters, the Benton Emergency Safety Tool is a *must* for all fire-fighting and civilian defense forces. A one-piece, chrome-plated, special alloy hardened steel tool that combines a dozen tools in one. Rubber grip completely insulates from electric shock up to 12,000 volts. Weighs only 4 pounds; 18 inches in length.

Chart above shows the multiple features of this single tool that meets the demands of emergency situations in fire fighting, police, industrial and civilian defense protection.

Write for descriptive literature and prices.

BENTON TOOL CORPORATION 425 ENGINEERS BLDG. CLEVELAND, OHIO

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Get the **"RIGHT OF WAY"** *Right Away—*
with these brilliant, durable "Cafco" Signs!

ORDER TODAY AND TAKE ADVANTAGE OF THIS OFFER!

FREE—
1 SET "FIRE CHIEF" SIGNS FREE with an order of 5 sets or more of **"FIRE DEPT"** Signs!

Red Background • Brilliant, polished white letters • Size 3½ x 11 inches. Easily readable day or night • Postage free if payment sent with order.

PRICES AND TERMS

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CAFCO
OFFERS COMPLETE EQUIPMENT FOR ANY FIRE DEPARTMENT • CAFCO WRENCHES • RINGS • LIGHTS • HOSE EXTINGUISHERS • CHARGES, etc.

CAPITAL FIRE EQUIPMENT CO.
1014 28th STREET SACRAMENTO, CALIF.

The above prices are F.O.B. Sacramento, plus such sales tax or Federal tax as is required by law. Terms in all cases will be cash unless sold to City, County or incorporated Fire Departments or Districts.

. . . 700 pupils led to safety and apparatus from all nearby communities worked to save Wm. McFarland School at Bordentown (N.J.)—loss $350,000. . . . Afraid to jump from second floor into blanket held by men, 12-year old son of John Dey Jr., Philadelphia (Pa.) burned to death. . . . Fireman Raymond Cosgrove, 47, member H & L Co. 153 N.Y.F.D. collapsed and died while fighting small fire in dwelling. . . . *"Disgusted with life"* Mario Paschapto, 38, Staten Island (N.Y.) took hard way out; started two fires, one in his room, one in hallway; then swallowed contents of two bottles of acid. . . . Blaze under hood of auto in Bradenton (Fla.) burned insulation, short-circuited horn, which blew until firemen arrived and extinguished blaze (ER). . . . On eve of retirement from N.Y.F.D. to accept defense job of importance, Batt. Chief John M. Breen, his driver fireman O'Brien and car, were involved in smashup while responding to small fire. Wreck attributed to fact N.Y. City defense restrictions bar use of sirens on fire apparatus in responding to alarms. . . . When his car hit fire Lieut. Michael Duane, Bronx (N.Y.C.) and he was found to have improper driving license, L. T. Judd, importer, was fined munificent sum of $1 in Downtown Traffic Court—Signal Engineer Wm. F. Hennessy, N.Y.F.D. addressed Board of Directors, Fire Chiefs' Emergency Plan, Westchester County on occasion of Boards approval of the New York-Westchester mutual-aid hookup. The organization itself later ratified action of Board. . . . While flames were gutting parish house of St. John's Protestant Episcopal Church, Brooklyn (N.Y.), Rev. Hedley Williams kept right on preaching; firemen saved Church proper. . . . When fire destroyed home, four members of family of Mr. and Mrs. John Christy jumped from upstairs window into snowbank to safety —thermometer 19 below zero. . . . 218 hospital patients—50 of them bedridden—were removed safely while fire raged through Kansas State Hospital for Epileptics; building was destroyed. *It shows the value of drills!* . . . When Vamps of Inwood L.I. (N.Y.) responded to early morning alarm they found it was their own firehouse. However they managed to drag out apparatus and fought flames with partial success.

* * * *

Bang Goes a Theory!

Exploding old theory that little lads shout with glee when school-house catches fire, four youngsters went to work when Edgewood school, just outside Cedar Rapids (Ia.) took fire, put ladder to attic storage space, emptied four extinguishers on Christmas decorations that were flaming. Then, when this effort failed, they connected garden hose and were pouring thin stream on fire when city firemen arrived. Orchids to the 12-year olds.

* * * *

New "Neckpiece" Just a "Frameup"?

This yarn, from our Iowa Clipper ER, starts with Paul Brown, 4-year old son of Ted Brown of Kansas City. Seems that Paul, playful-like, pulled the toilet seat down over the head of Tommy, his 2-year-old brother. The seat got caught around Tommy's shoulders—and when it wouldn't come off he got to screaming. And Paul sneaked into the bedroom, while Mrs. Ted came to the rescue. But she couldn't get little Tommy out of his "picture frame." So she called her husband at the office for help—wanted to know where she could

get a saw and cut Tommy out. But hubby thought she'd better call the fire department—quickly! So she did.

The dispatcher on the board had a tough time understanding her (and who can blame him?). But he finally figured it out—and sent the Brothers—8 of 'em. They came, trooped in, and Tommy, who'd quieted down, started screaming again. He screamed louder as various experiments were tried to extricate him. Those who weren't occupied with trying to remove the seat woogie-woogled at Tommy and scared (one word censored) out of him by such stunts as putting their heavy helmets on his head.

Their reasoning was good—the idea that what goes on must come off—but the Brothers, and Tommy didn't get anywhere. And when their efforts brought forth new shrieks from the victim, they got "what-for" from Tommy's ma and the maid Bertha, who insisted on supervising the job. So both Brothers and Tommy were on—or in—hot seat!

Finally, worn out, the blueshirts gave up. Two stayed to entertain Tommy, while rest scouted neighborhood for a saw. And lo!—while they scouted, one of the remaining Brothers happened to tip the toilet seat at just the right angle, and lo—off came Tommy's wooden collar! Rejoicings were heard in the land! Meanwhile, culprit Paul remained secluded in the bedroom until firemen departed. What he got after that we wot not!

* * * *

Mash Note from Brooklyn

Best laid plans of men and mash went awry when fire which broke out in 3-story residence of Long Beach (L. I.) disclosed it had started in a 500-gal. still on second floor. Additional equipment to increase capacity to 5,000 gals. was found on premises—or what was left of it. Neighbors said "tenant left hurriedly when fire was discovered" It's said he hasn't been seen since.

* * * *

Brothers Work Fast—and How!

The Brothers of the Ottumwa (Ia.) F.D. put on extra speed, and extra licks, t'other day. It was a Saturday evening. The phone at central fire station rang. Chief Sam D. Russell, standing nearby, lifted receiver to take the address as other lads rushed to their places on the rigs. Zowie! It was the Chief's own home wot was burning. And did the gang make speed! Fire was "trifling"—just some kindling!

* * * *

Department of Red Faces

The only happiness we get out of that nutty error in the February issue (you know, where we showed the "Racquette River Truck before and after") is the fact that so many of the Faithful rushed to appraise us of the blunder. It just goes to show how critically this publication is read. To those who saw the mistake and wondered thereat, let it be said that there *were* two different trucks pictured and the nice shiny *new one* should have been captioned to that effect. Our special appreciation and verbal orchids to Ross W. Turner, Corning (Calif.), Chief Harold Titus, Wallkill (N. Y.), L. C. Breitzman, Evanston (Ill.) George F. Doray, Syracuse (N. Y.), Chief H. B. Wells, Augusta (Ga.) and John Ward, Thief River Falls (Minn.) for their communications and kind words.

Your **QUAKER FIRE HOSE MAN...**

Defense and You!

To insure Victory, Quaker is using a larger portion of its time to fill the needs of Defense.

We know our friends would want it this way—so if your order of Quaker Fire Hose hasn't arrived, it's because we are giving Uncle Sam full right of way.

Quaker has rolled up its sleeves and is doing a gigantic job of turning out thousands upon thousands of feet of Fire Hose and every foot is needed to safeguard America.

FIRE HOSE • FORESTRY HOSE
CHEMICAL HOSE • SUCTION HOSE
MULTIPLE JACKET HOSE made in FOUR distinct and different constructions.

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A SPECIALLY DESIGNED **HYDRANT for EMERGENCY CONDITIONS**

The **PORTABLE FIRE HYDRANT**

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Now is the time to prepare for emergencies such as aerial "Blitz" or bombardments. Make sure that you will have plenty of outlets from your water supply. Hydrants may be blown up or disabled by blasts or saboteurs or may be so covered with debris as to be unusable. THE ROSS PORTABLE FIRE HYDRANT is easily attached to any high pressure main in from 18 to 30 seconds and affords you four 2½" hose connections adjustable for any pressure and a fifth connection 2½" to 3" delivering full pressure. All pressures up to 500 lbs. per square inch. This important piece of equipment can be carried to the fire on any piece of apparatus and its light weight, only 110 lbs., makes it easy for one man handling.

ROSS VALVE MFG. COMPANY, INC.
TROY, NEW YORK

TOMORROW'S DEFENSE depends on TODAY'S PREPARATIONS!

BOYER

HEADQUARTERS
for FIRE APPARATUS
and FIRE DEPARTMENT SUPPLIES

Fire chiefs and fire officials — now is the time to bring your department up to peak efficiency. The job of protecting your community demands it. At the same time you want to get the most for your taxpayers' money. One way to achieve this is through Boyer.

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BOYER FIRE APPARATUS CO.
LOGANSPORT INDIANA

THE VERSATILE Emergency TOOL
HKP
FIREMAN'S CUTTER

Here is a high-speed, heavy-duty "hot" line cutter—with important secondary uses.

Has Cohardite insulation moulded onto the handles — a safety measure against abrasion and puncture — each pair of handles thoroughly tested before shipment to withstand 20,000 volts. Jaws easily cut ½" solid copper wire and open out to 1⅛" to admit heavily insulated wire. Its special search hook helps find and guide wires into the cutting jaws in smoke and darkness.

In fire-fighting, wreckage clearance and rescue work, this tool is quick, efficient and dependable.

Tested by many years of service in municipal fire departments throughout the country, the HKP Fireman's Cutter is specifically designed to fulfill the requirements of Civilian Defense. It is a worthy member of the famous line of Porter Metal Cutters.

SEND FOR FREE DESCRIPTIVE FOLDER
It's free, of course.

H. K. PORTER, INC. EVERETT MASS.

Lukens Again Chief at Auburn, Calif.

S. Guy Lukens has again been chosen as Chief of the Auburn Volunteer Fire Department. He has served as Chief

Chief S. Guy Lukens

of Auburn Hook and Ladder Company No. 1 continuously since 1905, having been elected every six months by the members of the company. Chief Lukens has been a member since 1902.

Other officers elected were Henry Gietzen, First Assistant; Fred Gebhart, Second Assistant; Myrel Carmen, Secretary; L. S. Huntley, Treasurer, and E. S. Snodderly, L. H. Reynolds and C. D. Locher, Trustees.

Auditorium Destroyed by Fire

A general alarm fire which called out all apparatus of the New Britain, Conn., Fire Department on January 6 destroyed a large auditorium building used by a number of fraternal societies, and caused damage estimated by Fire Chief William J. Noble at more than $75,000.

The fire was the fourth in the same building during the last six months. Arthur E. Goodrich, seventy-year old janitor of the building, confessed the following day to setting the blaze. The building was on Arch Street and known as Odd Fellows Hall.

The first alarm was sounded at 6:33 P.M. when flames were noticed in an attic of the building. Working in near zero weather six companies under command of Chief Noble and Deputy Chief Michael J. Butler, brought the blaze under control three hours later. Twenty firemen were ordered from the building by Chief Noble ten minutes before a skylight crashed to the floor, bringing down the roof and part of the side walls. Deputy Chief Butler had both hands frozen and was treated at the scene.

THOMAS F. MAGNER

Second Hand Pumper Wanted

Chief Earl C. Burt, of Enosburg Falls, Vt., reports a local industrial plant is in the market for a serviceable second-hand 500-750 g.p.m. pumper, fully equipped. Further details may be secured from Chief Burt.

The Round Table

(*Continued from page* 168)

use and care of gas masks and the handling of incendiary bombs.

Interest on the part of the auxiliaries has been very good after completion of the course.

Members of the auxiliary are assigned to one of our regular companies after they have completed their course, and they drill with the company to which they are assigned on two nights per month.

Each man is presented with an identification card upon the completion of his course. Many of the auxiliaries have worked with the department at multiple alarms.

Benjamin L. Chase, Chief, Haverhill, Mass.: We have had little difficulty so far in enrolling men for our fire auxiliary.

The men enrolled show a keen interest, and this interest is well maintained as far as the work is concerned.

We give the members of the auxiliary a twenty-five hour course spread over a ten-week period, and during this course a written examination is given. This helps to stimulate interest.

These men have proven that they would be very successful and efficient if the proper equipment and apparatus was provided.

The fact that the proper equipment and apparatus has not been provided is the reason for whatever loss of interest we have among the men.

The auxiliary is provided with a meeting place, but no special privileges. Uniforms, badges, etc., have been talked of, but as yet unprovided.

I believe the one thing that is holding up progress more than anything is the talk of the State and the Federal Government helping the cities and towns. If the State and the Government would cut the red tape and definitely settle this subject one way or another, I am sure that progress and preparation would move much faster.

H. P. Constantine, Chief, Bangor, Me.: We have had no difficulty in enrolling auxiliary firemen.

We mix up the different instruction lessons to hold their interest, or try to have the training as interesting as possible for them, without long lectures, etc. This has helped in maintain interest.

We are going to issue arm bands to them after they have completed their training.

We encourage their coming in around the stations, asking any question they wish. Anything we are able to do for them in line with their training we are pleased to do. We want them to know that we are as much interested in their training as they are themselves.

George E. Renken, Chief, Laredo, Tex.: We have had no trouble whatever in enrolling auxiliaries. The response has been so great that we have twice as many as we can use on a waiting list.

It it natural for interest to lessen after the novelty wears off, but in our city we have not been confronted with such a problem as yet. Experience shows a high degree of efficiency will not be attained in an auxiliary force largely because of lack of discipline

AUXILIARY FIREMEN

Need and Depend on Small Units

Many fire departments and communities are today preparing for civilian defense by the formation of auxiliary firemen. These units, while not regular firemen, will be expected, in an emergency, to take care of many of the smaller fires. They must be provided with small, fast, simple, mobile pumping units.

THE PANAMA PUMPING UNIT

fills that need

The complete equipment (power pump, 100 gallon booster tank, suction hose, 150 ft. discharge hose and fittings), shown on this truck, can be had for less than $300. Haven't you a standard truck that can be made into an additional piece of fire apparatus? It can be attached in an hour's time or less. It does not interfere in any way with the normal operation of the motor.

Further information gladly furnished.

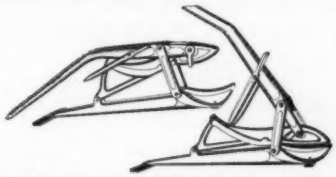
PANAMA PUMP COMPANY

HATTIESBURG, MISSISSIPPI

THE NEW PEERLESS HOSE CLAMP

Type E. The Result of 30 Years Experience in Hose Clamp Production

Demonstrated under Official Committee of International Fire Chiefs Convention at Toronto on a line from a pumper carrying 225 pressure and at Oklahoma City and New Orleans on 350 pounds hydraulic pressure. Witnessed by hundreds of Chiefs attending.



THE NEW PEERLESS HOSE CLAMP

— TYPE E —

SIMPLE CONSTRUCTION

INSTANT APPLICATION AND RELEASE

AUTOMATIC LOCK

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SAVES TIME — MEN — EFFORT
Making New Methods Possible.

APPLY CLAMP ON FLAT HOSE
Check Water—Carry the Line Up Ladder or into Warehouse Empty —Release Man at Hydrant to Help Handle Line.

SAVE TIME IN MAKING CHANGES
No Tracing of Lines — To Shut Down — Instead Use the Men to Make the Changes.

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DUPOR Combination SMOKE MASK

Provides maximum protection to eyes — makes possible comfortable breathing. Sponge saturated with water does the trick.

FOG-PROOF GOGGLES

Outfit is equipped with famous "Nod & Shake" Goggles! Water placed next to lens keeps fog off!

Price Complete $48 per doz.

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"ALL AMERICAN CHOICE" INVINCIBLE NOZZLES

PREPARE — PROTECT

Portable equipment is the watchword of today.

Buy—

INVINCIBLE NOZZLES

and enjoy the benefits derived by experience of the pioneers in the nozzle field.

Fig. 403

F. N. McINTIRE BRASS WORKS

Successors to A. J. Morse & Son, Inc.
BOSTON, MASS.
1837 -- 1941

and compulsory attendance.

We try to acquaint the auxiliary extensively with the apparatus and other equipment and to devote enough time to the study of war gases and handling of explosive and incendiary bombs. We stress upon the new men the necessity of a supplemental fire force to cope with multiple fires resulting from air raids.

Those who show special interest are promoted in the corps. Arm bands and badges will be handed out as soon as they are received.

W. J. Taylor, Chief, Riverside, Calif.: We have set as a goal the enrollment of a hundred auxiliary firemen. We have at the present time weekly drills which have been regularly attended by the sixty men who have signed up to date. We wish to recruit about forty more men which is going rather slowly. We have been quite particular in the past, taking only those up to forty years of age who are physically fit and have the necessary deferment. However, to fill our quota, we may have to take older men.

We have no lessening of interest at the present time. However, I believe it may be a problem.

We have created a fraternal organization with officers, and try to make drills as diversified as possible. For drill periods men are divided into groups of about ten each. These methods have proven quite successful.

Helmets, coveralls and badges are being supplied auxiliaries by the city; also an identification card bearing the picture of the auxiliary.

Frank V. Best, Chief, Galveston, Tex.: We have had no difficulty in enrolling our quota of auxiliary firemen. On the contrary, we have found continuous enthusiasm and there has been no desire of neglecting duty.

We maintain interest by continuous publicity of the fact that this city is subject to air bombardments due to its proximity to the seacoast that has numerous oil tanks and refineries.

No special privileges are given our auxiliaries. We are at present supplying them with arm bands to designate their identification.

W. P. Payne, Chief, Spokane, Wash.: At first we had some difficulty in getting men to enroll, but at the present date response is very good.

Interest seems to increase with training.

Progressive training with the actual tools and equipment of the department at the drill tower and training in the different methods of fire fighting with emphasis on the methods of ventilation, salvage and overhauling are employed to maintain interest. This training is proving very successful.

Our auxiliaries are given badges, but no special privileges, except during an emergency in the actual combating of fire, they would enjoy the same privileges as regular firemen.

John W. O'Hearn, Chief, Watertown, Mass.: We had some trouble with holding the attention of the first group, but after the Pearl Harbor affair, they came to us.

Interest is increasing. All we need is equipment which are in the market for but unable to get. Show them "their kit" and they are ready to go.

We have weekly meetings with interesting talks and pictures. All the auxiliaries are anxious to learn more

SPEED *plus* SAFETY

For your

PUBLIC BUILDINGS

Fire Fighting Officials, recommend the Safe, Speedy, Endorsed Potter Slide Fire Escape for your Public Buildings.

More than 6,000 are now in use; hundreds of lives have been saved in actual fires. If you have a school, hospital, institution or industrial plant with high fire hazard, you owe it to your community and the lives you protect to write for our catalog.

The recommendations of our experienced engineers are yours for the asking, with no obligation to you.

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HELP DEFEND YOUR COMMUNITY

BY COOPERATING FULLY WITH YOUR LOCAL CIVIL DEFENSE ORGANIZATION

LET'S ALL REMEMBER — "IT CAN HAPPEN HERE." GUARD AGAINST SABOTAGE and FIRES DUE to NEGLIGENCE OR CARELESSNESS

BE ON THE ALERT— ALWAYS

As for Excelsior Brass Mfg. Co., we shall continue to do our part by turning out Quality Fire Hose Nozzles as fast as we can. But even with our brand new plant and greatly enlarged capacity we are having difficulty filling orders promptly.

EXCELSIOR BRASS MFG. CO.

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Mfrs. of the **COLT** Nozzle and Fire Dept. Brass Goods for Nearly 30 Years

JANESVILLE QUALITY FIRE COATS

Our coats are giving excellent satisfaction in most of the large fire departments throughout the U. S. and

THERE MUST BE A REASON WHY SO MANY FIREMEN INSIST ON JANESVILLE QUALITY

Rubber and Duck Coats and Bunkers, Boots, etc.

We also manufacture White Striped Safety Coats.

JANESVILLE APPAREL CO.
JANESVILLE, WIS.

USE **Shuredry SALVAGE COVERS**

Control loss from water damage by the use of

SHUREDRY SALVAGE COVERS.

Thorough drill in their use as covers and catchalls will improve your department's record. Light and easy to handle, they do not freeze even at very low temperatures and will not crack when folded for storage.

Write for information and prices.

FULTON BAG & COTTON MILLS
Manufacturers Since 1870
Atlanta St. Louis Dallas New York
Minneapolis New Orleans Kansas City, Kan.

so they attend meetings and ask questions. Each weekly meeting brings in new members.

Auxiliary members are trained by our regular drill master. After twenty lessons they are given a certificate of fitness issued by our State Department of Education and a badge having the Town Seal with the word "Auxiliary" on it. That is the pay-off and in great demand. Uniforms may come later.

D. P. Rachal, Chief, Port Arthur, Tex.: We have not exactly had trouble in enrolling our auxiliary firemen, but it has taken quite a bit of time.

We teach the men the use of small tools, rope lines, knots, etc., and also drill with them on the fire trucks. This has proven satisfactory in holding the interest of the men.

We have not received our arm bands, badges or uniforms as yet.

Thomas J. Phelan, Chief, Trenton, N. J.: We have had no difficulty in enrolling our quota of auxiliary firemen.

To maintain their interest we give them regular drills. We have noted improvement as far as interest is concerned.

No special privileges have been given the auxiliaries yet, but we contemplate furnishing badges and fire clothes.

R. A. Bogan, Chief, Baton Rouge, La.: We have had no difficulty in enrolling auxiliary firemen in our city. To maintain interest we insist on the auxiliary firemen doing the job as they are taught.

On completion of instruction, the auxiliaries will be given arm bands and assigned to their respective areas.

C. C. Jennings, Chief, Tulsa, Okla.: We have had no difficulty in maintaining interest among our auxiliary firemen.

We keep the classes small and see that each group has a qualified instructor. We have short lectures and more drill work with tools and equipment.

Identification cards are issued to the men after they have finished the course.

Joseph E. Scanlon, Chief, Lynn, Mass.: More interest has been shown by the auxiliary firemen since the war started. No special methods have been employed for maintaining interest.

No means of identification has been furnished the men.

William J. Mohr, Chief, Santa Monica, Calif.: We have had difficulty in enrolling our quota of auxiliary firemen, but we have not found that interest lessens after the novelty wears off.

Arm bands only are given the men.

E. F. Coop, Chief, Pasadena, Calif.: We have had no difficulty enrolling auxiliary firemen since December 7th.

The men are properly drilled and equipped. We have competitive drills. The men are raring to go.

Identification cards and helmets are furnished the men.

Homes F. Lyles, Chief, Houston, Tex.: We have no difficulty whatever in enrolling our auxiliary firemen.

All the men are photographed and fingerprinted. Arm bands will be furnished when necessary.

G. W. Stout, Chief, Charleston, S. C.: We have had some difficulty in enrolling our auxiliary firemen. We have, however, had rolling practice drills which help to maintain interest. These have proven satisfactory.

WHEN THEY *CONSULT* YOU

Today's National Defense Program makes the industrialist more fire-conscious than ever. Decentralization of factories, coupled with the ever-present threat of sabotage, brings new, *individual* problems into adequate fire protection.

Expansion of airports is an immediate program. Because airports lie a considerable distance from the community, fire protection demands local equipment stationed at the field.

These problems are solved with the Seaman Minute-Man. In a jiffy the Minute-Man can be hooked to a passenger car—and in an instant it's *there*—working quickly in the first vital minutes.

When manufacturers, your own fire commission, or airport management consult you—recommend the Seaman Minute-Man.

Pumps are made in various capacities from 25 to 500 G.P.M. Pumps are also offered separately.

Please write for further information. No obligation.

The Seaman **MINUTE-MAN**

SEAMAN MOTORS
MILWAUKEE, WISCONSIN

Keep Your Batteries ON THE ALERT

WITH A

TUNGAR TWO-RATE CHARGER

FOR 40-AMP. CHARGING OF 6-VOLT OR 12-VOLT BATTERIES

Model 6RB84B5 Charger

The Tungar Two-Rate Charger will completely recharge a run-down battery quickly and safely. Sizes are available for 6- and 12-volt batteries. The initial high-rate charge of 40 amperes automatically drops to a low finishing rate of 16 amperes for the last 20 per cent of the charge, then automatically cuts off.

Portable—can be easily moved to any desired location. Compact—requires less than one square foot of floor space. Complete—furnished with long D-c. leads and clips, a long A-c. lead which plugs into any convenience outlet of the proper rating, and two 99X45 Tungar Bulbs.

For more information, just write Section A-2583, Appliance and Merchandise Dept., General Electric Co., Bridgeport, Conn.

GENERAL ELECTRIC

B.K. INHALATORS

Automatically furnishes the correct amount of oxygen or oxygen carbon dioxide mixture and automatically indicates the correct timing of resuscitation.

Not just a mere pressure reducer. Remedial gas set to indicate flow "ON DEMAND".

No valve adjustments are required. Does not require two men to operate. It is practically fool-proof.

Approved by American Gas Association.

Accepted by the Council of Physical Therapy of the American Medical Association.

Endorsed by the Association of Police and Fire Surgeons.

Write for Bulletin No. 104

Bishinger-Koehler Mfg. Co., Inc.

(Pioneers in equipment of proven merit and efficiency)

7838 Kelly Street Pittsburgh, Pa.

Arm bands are given the men upon completion of the instruction.

Zephrim F. Drouin, Chief, Lewiston, Me.: We have 208 men on our rolls coming to drills. We have no time or room available for anything but drills.

No means of identification has been given the men yet, but we understand that a card and arm band will be issued by the State Civilian Defense Council.

W. E. Jackson, Chief, El Paso, Tex.: We have some difficulty in enrolling auxiliary firemen, but it has not been too great. We have not found that interest lessened appreciably.

A regular course of training, including instructions at the drill tower is given to auxiliaries. This has proven very successful.

Arm bands and car stickers will be given the auxiliaries when they have completed the course of instruction.

Walter Scott, Chief, Kearney, N. J.: We instruct the auxiliaries in fire department evolutions and in the handling of magnesium bombs and war gases. This has helped to maintain interest.

The auxiliaries have not received any special privileges, nor any means of identification.

Chris W. Noll, Chief, Poughkeepsie, N. Y.: We hold semi-monthly drills which have proven successful so far. We have not been organized for very long.

A badge will be given each member after he has completed the course of instruction.

George W. M. Brown, Chief, Newburgh, N. Y.: We have not been able to find any methods for maintaining interest as yet. We give arm bands when the men qualify.

Charles Plummer, Chief, San Jose, Calif.: We use motion pictures, lectures and drills to maintain interest. These are fairly good.

Arm bands and badges are given the men.

W. T. Miller, Chief, Petersburg, Va.: We have had no difficulty in enrolling about 150 men who are still attending school. We expect to give them arm bands as a means of identification.

A. F. Taylor, Chief, Richmond, Va.: We have not had any great difficulty in enrolling auxiliary firemen. We have found that interest lessens to a certain extent when the novelty wears off.

We give the men drills with apparatus and appliances and also lectures on bombs, etc.

We are considering arm bands as a means of identification.

E. P. Welch, Chief, Columbus, Ohio.: We have two hour sessions of training for the auxiliaries at which movies and slides are shown. The men actually handle the equipment. After graduation clubs are organized. We have found this procedure successful in maintaining interest.

Auxiliaries are permitted through fire lines and are made welcome at engine houses. We give them badges, arm bands and special cards such as the one included herewith.

Joseph A. Kirby, Chief, Dayton, Ohio: We have had no difficulty in enrolling our quota of auxiliary firemen. We have found that they become more interested as they attend classes.

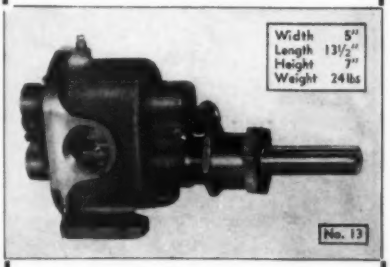
(*Continued on page* 213)

OBERDORFER

SINCE 1890

BRONZE GEAR PUMPS

Many Fire Departments have recently considered our No. 13 bronze pump an essential part of their war time equipment.



1200 RPM — 120 lbs. Pressure

75 Gallons per Minute

All Bronze - - - $60.00

Fire Pump Division

M. L. Oberdorfer Brass Co.

SYRACUSE, NEW YORK

A Recently Developed Treatment for Burns and Skin Irritations!

LANYARD

TANNIN-GLYCEROL LOTION

Fire Fighters—here is what you have been looking for: An instant help for burns and skin irritations. When applied to first degree burns, it allows you to remain on duty; no bandaging necessary. It reduces the pain and speeds up the recovery. TANNIN-GLYCEROL LOTION can also be used as a skin protection against fire—heat—fumes—gases—vapor—steam or oil. One ounce is sufficient to completely cover a 150 lb. man. It is water resistive, yet does not hinder perspiration or interfere in any way with your physical activity. It comes in glass containers with plastic caps from 1 ounce to 1 gallon sizes.

Write for descriptive literature.

LANYARD CHEMICALS, INC.

Pharmaceuticals

37 HARTFORD ST., BOSTON, MASS.

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FOR EASY REFERENCE WHEN YOU'RE IN THE MARKET FOR NEW FIRE EQUIPMENT

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For information about products of any manufacturer not listed above, write to Readers' Service Dept. FIRE ENGINEERING, 24 West 40th St., New York, N. Y.

MIDWESTERN FIREMAN'S COAT

With Detachable Lining

This coat, furnished in different materials, has a special feature a detachable lining, of pure wool. This feature makes it adaptable to all conditions of weather and assures you of the warm, dry protection that only MIDWESTERN can offer.

Write for Catalog

All Midwestern garments are Union Made, A.F.L.

MIDWESTERN MFG. CO.
MACKINAW, ILLINOIS

MANHATTAN FIRE HOSE

THE MANHATTAN RUBBER MFG. DIVISION
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Executive Offices and Factories . . . Passaic, N. J.

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ONE PIECE
ONE MOVE
and Your Face Is
COMPLETELY COVERED!

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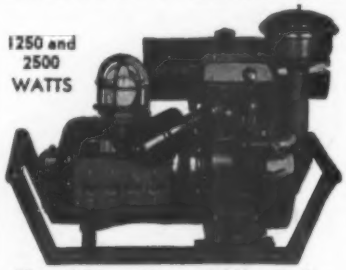

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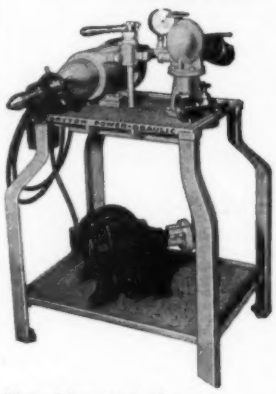

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The Round Table

(*Continued from page* 208)

The course consists of fifteen lessons, each of two hours duration and held twice a week for seven and a half weeks.

We give badges to the men.

C. E. Harris, Chief, Akron, Ohio: Our lessons started on February 9th. At the time of writing interest was very high. Temporary identification cards will be issued to the men.

Edward F. Dahill, Chief, New Bedford, Mass.: We have had no difficulty in enrolling auxiliary firemen, and have found that interest has not lessened.

Herein is the application blank that must be filled in before a member becomes a member. Upon completion of his training he gets a membership card.

W. B. Sykes, Chief, Portsmouth, Va.: We held our first meeting of the auxiliary firemen on February 4th, and at this writing we cannot comment on its success.

Large Gasoline Fire at Sacramento

A spark, apparently from a gasoline truck motor in a shed of the Hancock Oil Company just outside the northern city limits of Sacramento, Calif., on the main highway between the West Coast and Reno, U. S. 40, caused a $190,000 fire which destroyed 180,000 gallons of gasoline and oil and injured at least ten persons on January 19.

The fire menaced 375,000 additional gallons of petroleum products and it was only the herculean efforts of firemen from Sacramento and four nearby communities that saved storage tanks of six other companies.

Fire Chief Terence Mulligan of Sacramento directed the combined efforts of the firemen.

Three of the injured were firemen who suffered broken legs and burns when a tank blew up. The others were spectators who were either knocked down by automobiles or trampled in running to escape an explosion.

The shattering blast shook an area of several miles. It was followed by three others in rapid succession as gasoline fumes ignited.

The fire was the fourth big one in the area in a period of two weeks, although no sabotage was discovered in any instance.

BOB GREENOCK

Commissioner Johnson Dies

Joseph Johnson who served as Fire Commissioner in New York City during the Tammany Administration died on March 8 at his home in Atlanta, Ga.

In 1911 Mr. Johnson became a Deputy Fire Commissioner, becoming Commissioner of the Fire Department later in the year.

As Fire Commissioner Mr. Johnson began the introduction of motorized apparatus on a large scale, organized the Fire Prevention Bureau and caused an investigation to be made of the relation of arson and fire insurance, with a consequent reduction in the number of incendiary fires.

Fairfield County Plan Meets

Capt. Theodore J. Beliakoff of Rescue Co. No. 3, New York City, was the speaker at the February meeting of the Fairfield County Fire Chiefs' Emergency Plan held at Noroton Heights, Conn., on the 25th of February. Capt. Beliakoff discussed size-up of fires upon the arrival of the fire department, pointing out that the force of men on hand, the conditions of adjoining property and how far the fire has extended from its point of origin are important to note. He said that there are four ways in which fires spread. Either by flame contact, heat radiation, heat conduction or convexion waves. He pointed out that roughly there are three ways to extinguish fires, either by water which is considered a cooling-off process, by excluding oxygen by a blanket of gas or foam which is considered the smothering process, or by the removal of combustible material from the path of the fire. Salvage at fire does two things, not only salvaging property and cutting down the loss from fire, but removes combustible material from the path of the fire, therefore aiding in extinguishing the blaze.

He also discussed briefly the S. S. "Normandie" fire, saying that because regular staterooms had been removed, making each deck one long room, and because of the abundance of kapok mattresses, life preservers and hammocks, the fire had plenty to feed on; it was a difficult operation for the New York City Fire Department, because of the time needed to turn in the alarm, and the always prevalent water-front wind.

The tire situation was also discussed by the members present, Capt. Thomas O'Connor bringing the subject to the floor, stating that he thought if the firemen of the nation brought their case before the authorities that the rationing restrictions could be changed as they were in the cases of taxicabs and clergymen. The secretary was instructed to write to Washington and Hartford in an effort to voice the Plan's feelings on the matter. All the other County Plans were to be notified also of Fairfield County's action.

The Ways and Means Committee of the Plan, which consist of Leon R. Meaney of Greenwich, Chief James J. Sanger of Old Greenwich, and Chief John Mehring of the town of Stamford. were instructed to confer with Westchester County Emergency Plan officials relative to a mutual aid plan when Westchester County departments are called out to New York City or when Fairfield County departments may be called to Bridgeport or other defense center towns.

Assistant Chief William Sturgis of Ridgefield, chairman of the Standardization Committee, reported that Ridgefield has completed standardization of 2½" hose and equipment as well as hydrants, following the lead of the town of Greenwich, which has also tooled over to National Standard, which include equipment of Greenwich Center, Glenville, East Portchester, Old Greenwich and Cos Cob. Tools are available for other Fairfield county towns to follow suit.

The next meeting of the Plan will be at Southport, Conn., on March 25th. Invitations have also been received from Trumbull for the June meeting and from Stamford for the October meeting.

CHIEF JOHN MOEHRING.

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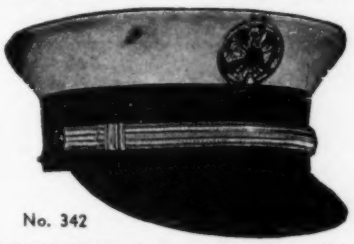

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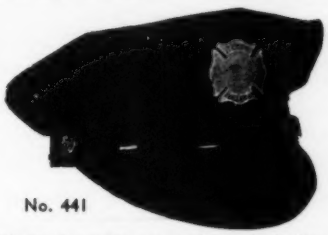

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When spread over a hot magnesium fire the pitch softens and seals the burning magnesium metal with an airtight blanket—smothering the flames.

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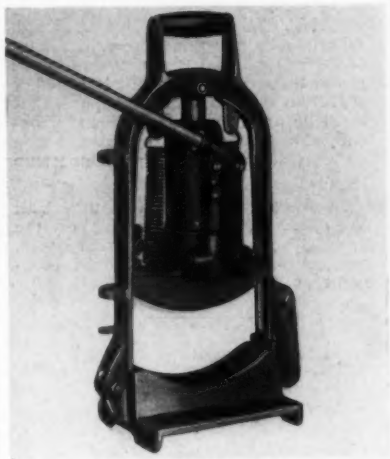

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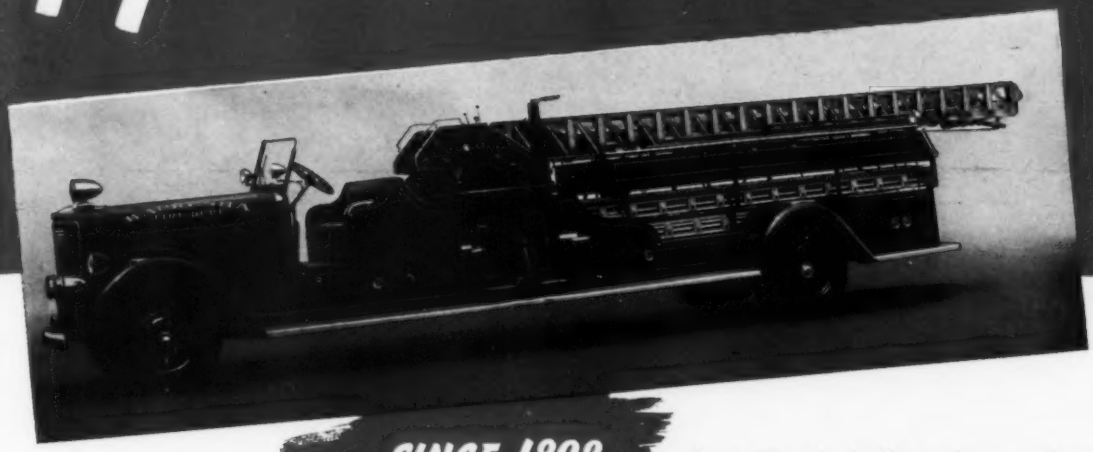

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